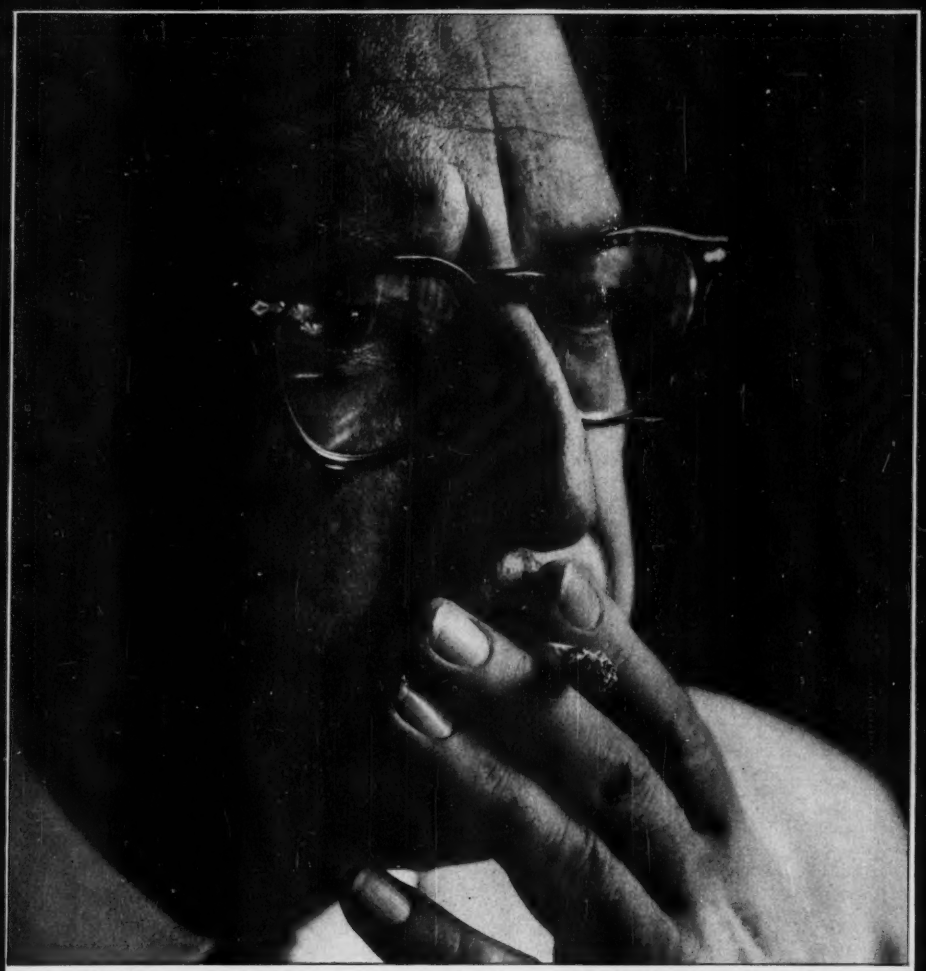
BUSINESS WEEK

WHY BUSINESSMEN KEEP ADDING

More Plant

PAGE 19

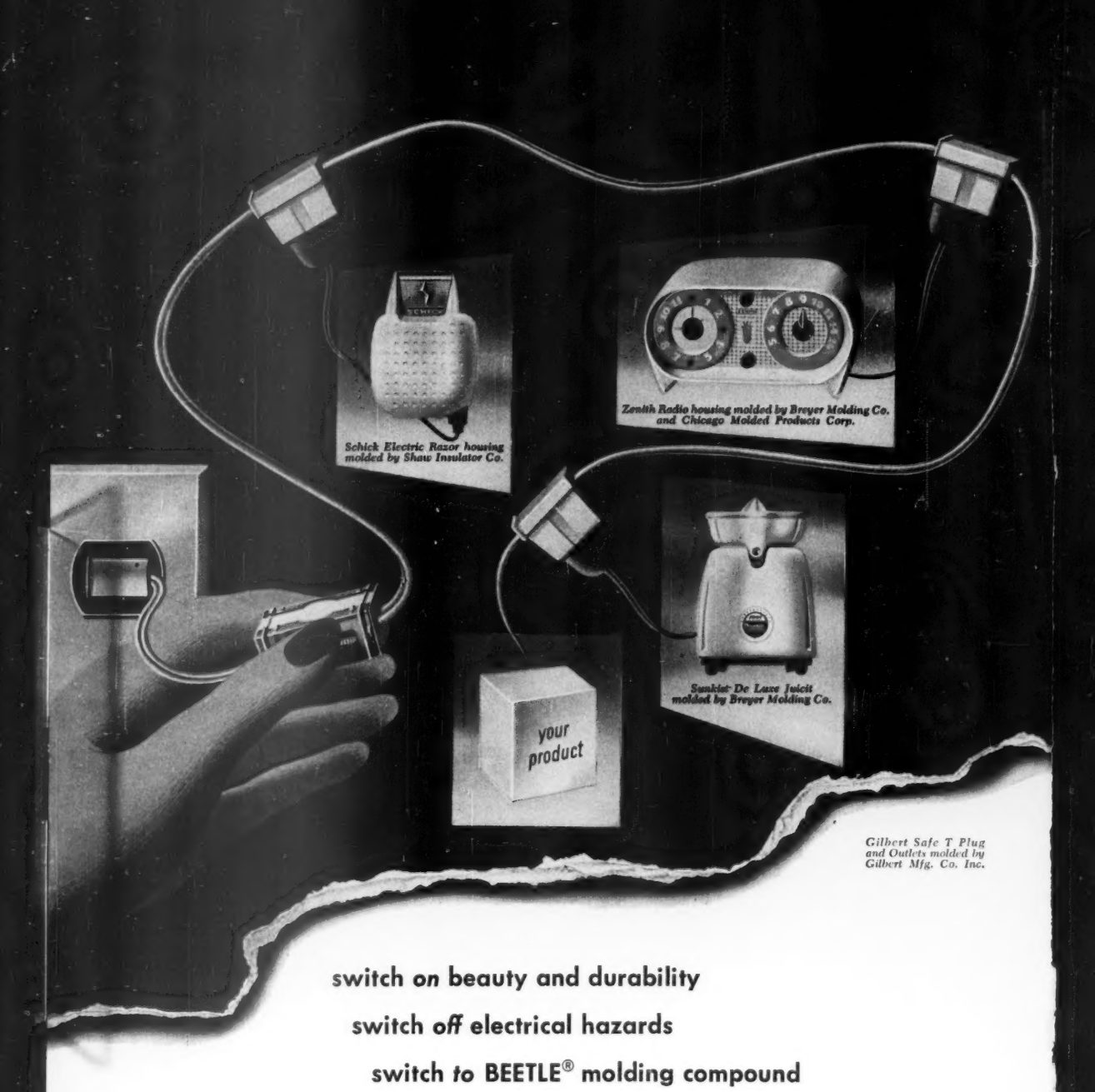


Gordon Dean, of AEC: Twice as many bombs . . . SPECIAL REPORT (page 99)

A McGRAW-HILL PUBLICATION

JULY 28, 1951

TWENTY-FIVE CENTS



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Thanks to BEETLE's resistance to heat, food acids, abrasion and dirt, its molded-in color and dimensional stability, products look better and last longer. For example...Schick electric razor housings have been molded of thermosetting BEETLE for 20 years.

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PLASTICS DEPARTMENT

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RESEARCH KEEPS **B.F.Goodrich** FIRST IN RUBBER

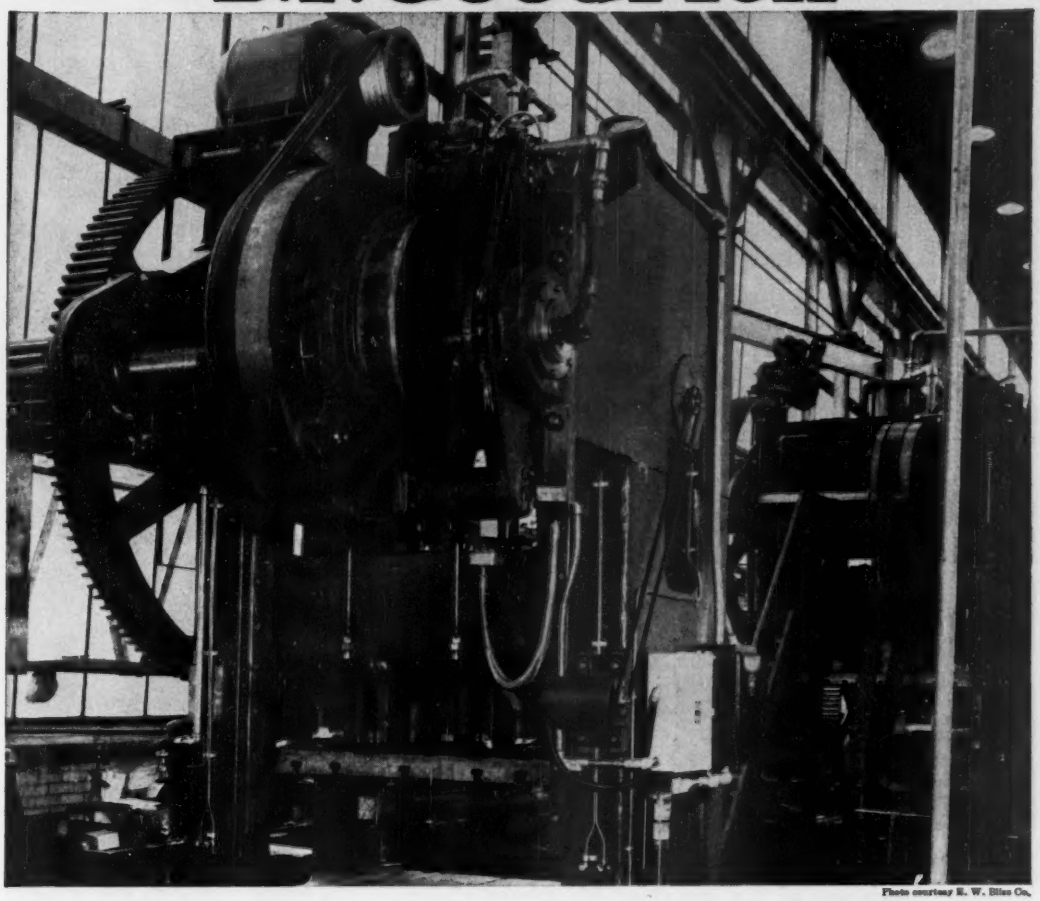


Photo courtesy E. W. Bliss Co.

Rubber drives a 200-ton punch

A typical example of B. F. Goodrich product improvement

METAL things you see every day take shape on a giant press like this. Two hundred tons of force and iron are walloped down on unshaped metal and first thing you know you have a refrigerator door or hub cap for a car. The four rubber belts at the top give the press its punch. But when they ran at full speed, shocks from the press made ordinary V belts go to pieces in a few days.

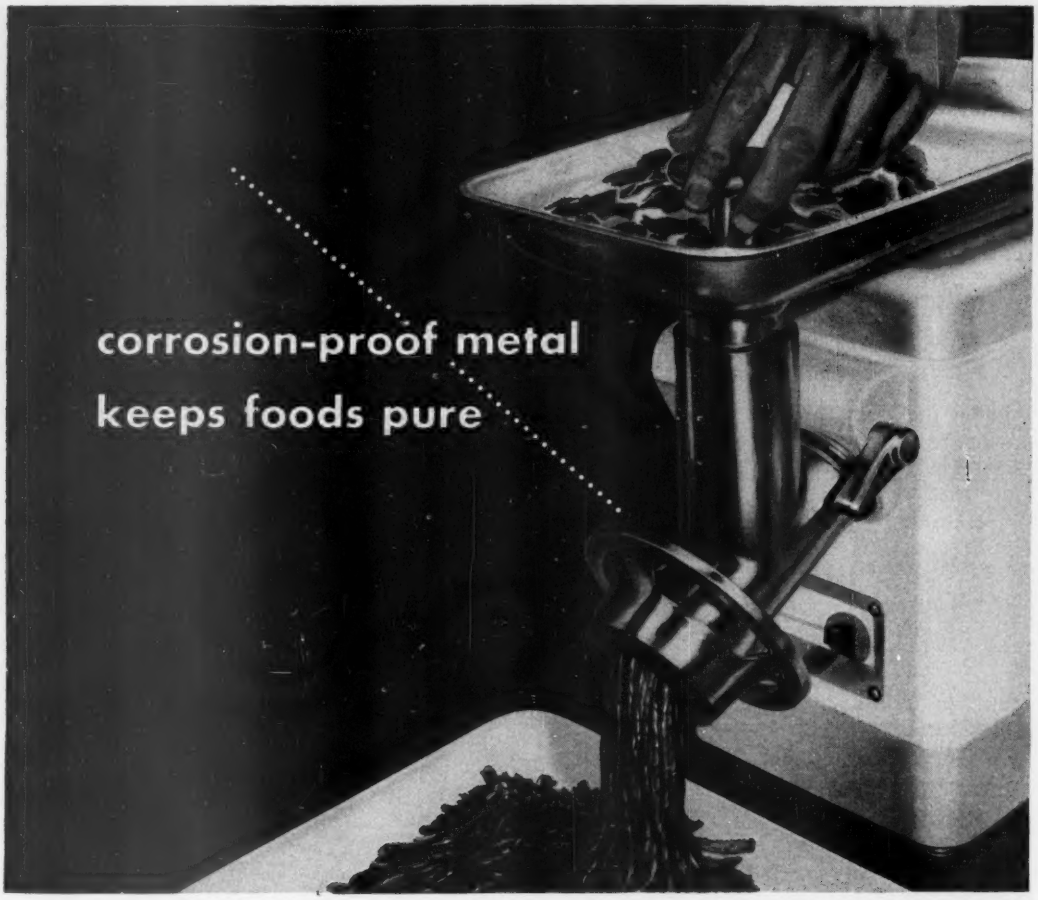
The press maker called in B. F. Goodrich men. What about the grommet V belt? It had been developed by B. F. Goodrich to give V belt users more wear for their money. Could grommet belts stand the shocks on the big presses? They began using this different kind of V belt and found it not only took the punishment longer but did a better job of running the press too. Grommet belts are more flexible, don't slip as much as ordinary belts.

A *grommet* is a tension member inside the belt. It's made like a giant cable except that it's endless — a cord loop made by winding heavy cord on itself. There are two grommets in every belt, and they make B. F. Goodrich V belts cut V belt costs for industries as much as 50 per cent. Only B. F. Goodrich makes the grommet belt.

An improved product like the grommet belt is typical of all products under constant study by B. F. Goodrich research. No product is ever considered perfect; we are always at work looking for ways to help customers do jobs better for less. That's why it will pay you to call in your BFG distributor when you need industrial rubber products. *The B. F. Goodrich Company, Industrial and General Products Division, Akron, Ohio.*

B.F.Goodrich

RUBBER FOR INDUSTRY



This casting eliminates copper plating and saves production costs

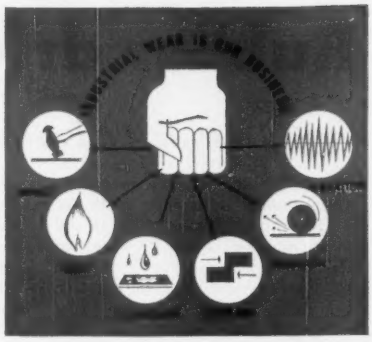
The business end of this super meat chopper will produce up to 20 pounds of meat per minute. The housing that guides the meat is a casting made of Chemalloy N-2 (Ni-Resist) which is resistant to wear and corrosion from meat juices and prevents iron contamination.

The alloy eliminates the necessity of copper plating before the final chrome finish, saving both scarce and costly material and production time.

This gravity feed chopper offers 50% greater speed and easier and cleaner work without mashing or heating the meat. It is widely used in hospitals, restaurants, hotels and food stores. Our Electro-Alloys Division filled the needs of the Toledo Scale Company for an exceptional casting.

This is just one of the many cast parts ideally suited to Brake Shoe Chemalloy. The difficult casting is held to close tolerances, is remarkably free from porosity and imperfections; and is of a uniform and closely grained structure.

Electro-Alloys invites your inquiries concerning quantity high alloy castings. Write Department A for brochure T-155 on heat and corrosion resistant alloys.



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10 Divisions of American Brake Shoe Co. produce wear-resisting parts in 35 American and Canadian plants.

AMERICAN BRAKEBLOK DIVISION • AMERICAN FORGE DIVISION • AMERICAN MANGANESE STEEL DIVISION
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It's so much better than sewing

Thread often is the weak link in fabric or leather articles. By contrast, a seam bonded with adhesive normally is stronger than the material itself.

Adhesives have other advantages over needle and thread. Take the matter of appearance. Adhesives make smooth-edged, modern designs easy to produce. They are adaptable equally to either simple or intricate shapes. They are especially fine for quilting and embossing. Such designs are produced quickly and easily, free of stitches and needle holes.

Freedom from needle holes is of real importance in watertight construction. Rainwear is an example as is the boat cushion pictured above. Needle holes, too, may act like perforations to weaken some materials, unsupported plastics, for instance. A suitable adhesive, on the other hand, produces a strong, moisture-resistant seam that's good for the life of the article of which it is a part.

Armstrong makes a variety of specialized adhesives for bonding fabrics and leather, as well as many other materials. If one of them can help you, we'd like to talk to you about it. Just call Armstrong Cork Company, Industrial Adhesives Dept., 5107 Reservoir Street, Lancaster, Pennsylvania. Available for export.

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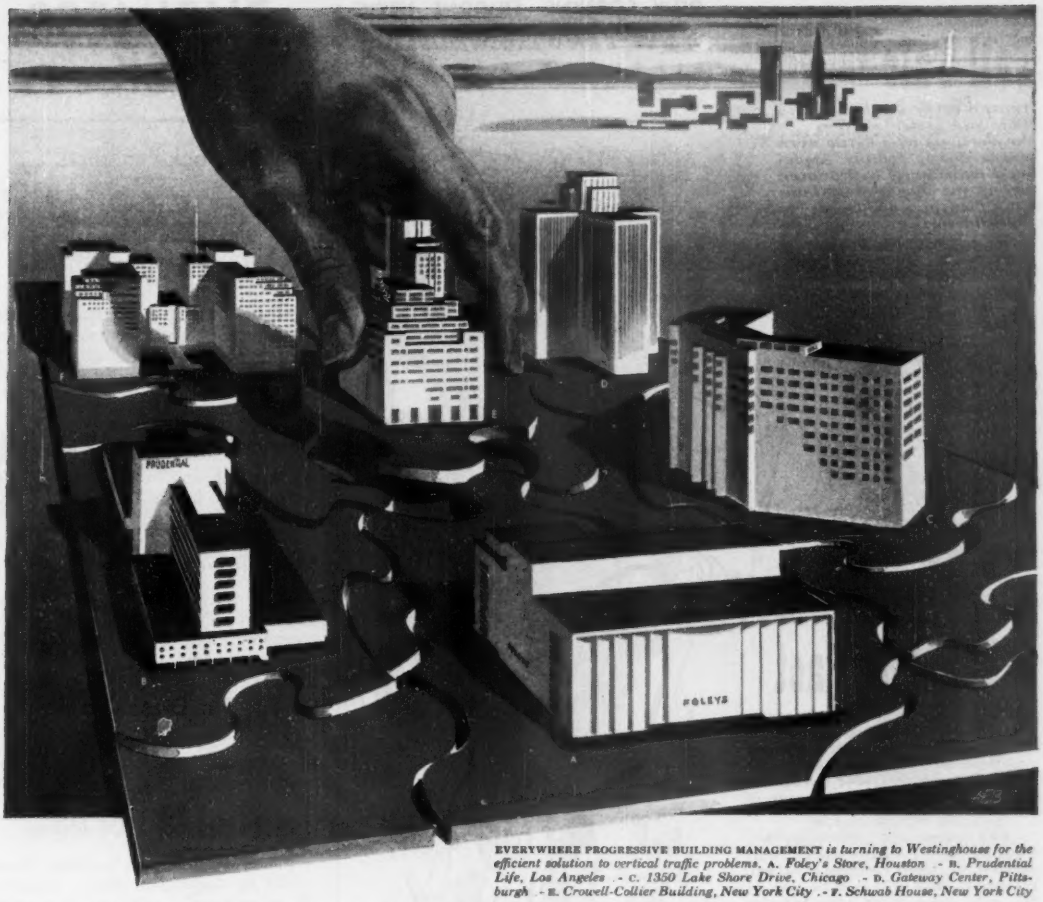

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FIT ALL THE FACTS TOGETHER

Before Buying Vertical Transportation

To get the right answer to any puzzle you've got to get off to the right start.

And when it comes to puzzling out your vertical transportation problems, start this way: Learn the facts about the products of several manufacturers. For you need the facts about vertical transportation before you can make comparisons. And without comparisons you can't be sure you're getting the system that will best protect your investment.

Through the years, Westinghouse developments have stimulated the vertical transportation industry to strive for ever-higher standards of quality and efficiency. In every phase of vertical transportation—equipment, maintenance, and service—Westinghouse has been the vanguard for progress. So, whatever your traffic problems—*see Westinghouse before you decide!*

For helpful information write Westinghouse Electric Corp., Elevator Division, Dept. A-1, Jersey City, New Jersey.

YOU CAN BE SURE...IF IT'S **Westinghouse**

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PASSENGER ELEVATORS • ELECTRIC STAIRWAYS • FREIGHT ELEVATORS • MAINTENANCE & SERVICE

In BUSINESS this WEEK . . .

Threat to Book Publishers

• FTC's complaint about leasing plates to book clubs strikes many publishers where they make their profit. P. 47

Stock Prices Don't Talk . . .

. . . for general business conditions anymore. But BUSINESS WEEK's Figure of the Week, Standard & Poor's 90-stock average, does speak for the stock market. P. 71

New Apartments—$45 a Month

• It's a fact, and in Los Angeles, too. Fritz Burns builds them with some skillful corner-cutting. P. 78

Those Towers You See . . .

. . . are microwave repeater stations—trademarks of a new kind of industrial communications system that is sweeping the country. P. 84

Do You Run Diesels?

• If so, better tank up. Fuel is likely to get scarce, more expensive, and poorer in quality. P. 90

How to Spend $106-Million

• That was Pullman's problem when it sold its sleeping-car service business. Its solution: Go out and buy more businesses. P. 114

End of the Export Boom

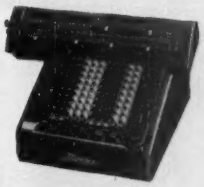
• Foreign countries put off buying so they can cash in on an expected post-Korean price slump. P. 129

THE DEPARTMENTS

"He saves bolts!"

When winter comes this fur-bearing tree poodle will regret his choice. Like the businessman who chooses too much or too little machine to handle his figure load. Shortsighted selection *that*, friends. For, as all businessmen know, all you need to solve any figuring or accounting problem is Monroe. Because Monroe makes a model to meet *every* need. And *every* Monroe makes operators more productive, more efficient. Yes, friends, when it comes to cracking tough figure bottlenecks, those Monroes are the nuts!

Depend on Monroe to give you the right model for every figuring and accounting need



Monroe CALCULATING Machine

MONRO-MATIC The latest for fast, fully automatic, economical figuring. Compact, portable, with famous "Velvet Touch"* ease of operation. Long, dependable service.

Monroe ADDING Machine

EVERY business needs this efficient grand total model. Adds and subtracts directly in two registers. Accumulates, stores totals. Saves time, steps up figure production.

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COMPACT space-saving bookkeeper that handles several kinds of jobs. Outstanding value. Does same work as machines costing much more. Smooth, effortless, nerve-saving "Velvet Touch"* operation.

*"VELVET TOUCH" originated in 1935 to describe Monroe's matchless ease of operation.

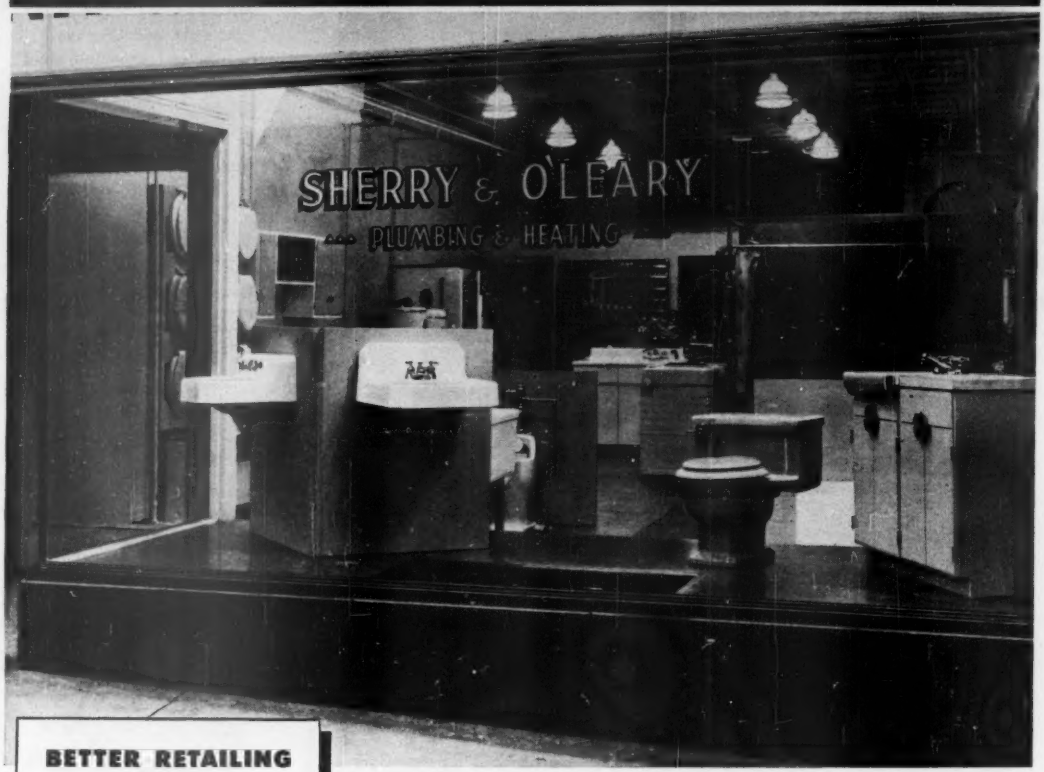
Every Monroe is sold only through Monroe-owned branches; serviced by Monroe's factory-trained organization.

MONROE *MACHINES FOR BUSINESS*

Monroe Calculating Machine Company, Inc., General Offices, Orange, N. J.

AMERICAN-Standard

First in heating . . . first in plumbing



BETTER RETAILING PLAN

Another example of
AMERICAN-Standard
Leadership

● Something big is taking place in the heating and plumbing industry. And it's a welcome change.

Heating contractors and plumbers who have long operated out of small shops and back rooms are now rapidly and enthusiastically swinging towards modern stores and modern merchandising methods.

The attractive main street type of store above is a good example of what's happening in city after city, in community after community.

One of the factors responsible for this transformation is the new American-Standard Better Retailing Plan.

Covering all phases of successful retailing, this sound, new plan shows even the smallest side street operator how to improve his store, his service and his merchandising methods.

The American-Standard Better Retailing Plan works for him . . . and for you!

In modern, brighter stores like this, you'll find not only the finest heating equipment and plumbing fixtures that money can buy, but better posted personnel eager to help you with home modernization ideas.

So, when your neighborhood American-Standard retailer spruces up his store, or opens a new one, give him credit . . . and drop in to see him. The superb products you'll see, and the service you'll receive, will open your eyes to the cooperation you can expect from stores featuring the American-Standard line.

LOOK FOR THIS

MARK OF MERIT

American Radiator & Standard Sanitary Corporation, General Offices: Pittsburgh 30, Pa.

Serving home and industry: AMERICAN STANDARD • AMERICAN BLOWER • CHURCH SEATS • DETROIT LUBRICATOR • KEWANEE BOILERS • ROSS HEATER • TONAWANDA IRON

BUSINESS OUTLOOK

BUSINESS WEEK
JULY 28, 1951

A BUSINESS WEEK SERVICE

The nation's manpower pinch hasn't developed so fast as expected.

Perhaps you can best account for that by noting that arms production hasn't come along on schedule, either. The two dovetail.

Civilian cutbacks, until now, have been small. Arms work has gone into new or standby plants. This takes time, holds labor needs back.

•

People working on production lines actually are fewer now than they were at the start of the year.

The June total was just under 13-million, the Bureau of Labor Statistics says. That's a shade below January—a decline so small that it can be brushed aside.

The thing that is significant is that there was no rise.

It should be noted, however, that there has been a modest increase in shop workers in durable goods—the plants with arms contracts. This covers up a decline of the same size in soft goods. But even in hard goods, employment is off a little from last spring.

•

Factories have been adding to employment—even though total production-line jobs haven't increased. Supervisory, clerical, and other nonproduction workers have risen 60,000 so far this year.

Arms plants probably hire key people before actual output starts.

•

Failure of factory employment to rise might be attributed to the inability to get new workers. Low unemployment points that way.

However, there are two sure indicators that this isn't true:

Marginal hands haven't been attracted into the labor force by arms-plant pay. Numbers seeking work aren't up much more than seasonally.

Trade-and-service workers haven't been shanghaied by factories. This total has been rising slightly (in World War II there was a sharp drop).

In short, arms plants still haven't tapped the labor supply importantly.

•

Restraints on homebuilding haven't cut back demand for construction workers. In fact, nearly 2.7-million were employed in contract construction last month, the highest ever. Factory building is the key.

•

One of the striking changes in employment in the year since Korea has been in the number of government jobs.

As was to be expected, new agencies sprang up all over the lot and had to be staffed. That resulted in government jobs rising to nearly 6.4-million, up 541,000 in a year.

Of this rise, nearly 80% was in the federal government; state and local increases accounted for only 121,000 jobs.

•

July's report on employment and unemployment is sure to show some effects of the periodic weakness in the soft goods field.

To some extent, too, cutbacks in consumer hard goods will show up.

These may not create much unemployment; a person laid off with a definite recall date isn't counted as jobless.

But it will mean many more people working fewer hours in July. That happened in 1949—and the unions said it phonied up the jobless total.

Some branches of the paper industry are beginning to report softer demand.

That adds another commodity to the long list feeling the slowup: textiles and apparel, small appliances, off-brand TV sets, lumber and some building materials, furniture and home furnishings.

There's some question whether autos and name-brand TV sets are in a slump or whether sales just look bad beside 1950's colossal highs.

•

Spreading troubles in textiles this week were reflected in rayon yarn. Prices were cut by leading producers on several types. A week ago cotton yarns turned soft (BW—Jul.21'51,p10).

•

Beef production in the big federally inspected packing plants fell off sharply after the rollback—and still is below normal.

In the first four weeks after the price order, all meat produced under federal inspection was 8% behind a year earlier. But that completely covers up the real drop in cattle slaughter:

Beef production was down 23% for the period; this was obscured by better-than-normal pork output (up 13%).

Of course, some of that beef wasn't "lost." The cattle were diverted to uninspected slaughter houses—where ceilings are winked at.

•

Geo. A. Hormel & Co. complains that, in the first four weeks of the cattle "holdup," production in its beef-boning department fell nearly 45%, which means the same drop in sausage and canning operations.

•

Poultry raisers are doing their bit to increase meat supplies.

Chicks hatched in June numbered 38% over a year ago. Only in two wartime years have June hatchings been above this year's.

For the six months, more than 1¼-billion chicks were hatched. That's 15% over last year and only 5% under the 1943 record.

These figures also promise high egg output next year, of course.

•

People lately appear to be eating the sugar they hoarded late in 1950. At any rate, sugar deliveries for the half year fell behind the first half of 1950. And that comparison, mind, is with a period last year that was relatively normal—before the buying wave.

•

Stockholders are getting less happy news on dividends than last year.

It's true that dividends are running 11% ahead of 1950. But not much of that can be credited to increases or extras voted this year; most of it represents higher rates authorized in 1950 and maintained in 1951.

Later this year, the record may look a little drab alongside the stream of "Christmas payments" that swelled last year's total.

•

Corporate profits still are good—but the second quarter wasn't so good as the first, and the third will slip further (page 110).

The trouble is that profits aren't tied to the business curve at a time like this. Taxes and unstable costs skim off too much.

On top of that, a long list of industries will be nicked this quarter by the "private recessions" that have hit them.

SURE CURE FOR DOUBLE TROUBLE

Oxy-acetylene welding is a lot safer and faster today because of a unique hose called Twin-Weld.® Invented and patented* by Hewitt-Robins, it does away with the dangerous tangle of individual oxygen and acetylene lines that formerly plagued welders.

Twin-Weld combines both hoses in one compact, molded unit . . . neat, flexible, non-kinking . . . yet readily separates for coupling to tanks and torch. It saves time in getting welding equipment into operation, makes it easy to reach the work, change position at will or work in close quarters on difficult jobs.

Making *better* industrial hose and belting has been a habit at Hewitt-Robins for almost a century. Twin-Weld is only one of many Hewitt-Robins "firsts" that have made the handling of fluid and solid bulk materials faster, more dependable, more efficient, more economical.

If you want the benefit of an international experience in solving your materials handling problem . . . whether in hose, belting, vibrating machinery or complete belt conveyor systems . . . get in touch with Hewitt-Robins.

*U.S. Patents 2,122,335 & 2,136,220

HEWITT-ROBINS TWIN-WELD HOSE is easily identified by the green oxygen line and the red acetylene line. One stroke of a knife separates the connecting fin for quick and easy coupling to equipment.

HEWITT HR ROBINS

Executive Offices: 370 Lexington Avenue, New York 17, N. Y.

HEWITT RUBBER DIVISION: Belting, hose and other industrial rubber products

ROBINS CONVEYORS DIVISION: Conveying, screening, sizing, processing and dewatering machinery

ROBINS ENGINEERS DIVISION: Designing and engineering of materials handling systems

HEWITT RESTFOAM DIVISION: Restfoam® mattresses, pillows and comfort-cushioning

Hewitt-Robins is participating in the management and financing of Kentucky Synthetic Rubber Corporation

Why monkey around with inferior tubing?

Bundyweld Tubing, double-walled from a single strip. Exclusive, patented beveled edge affords smoother joint, absence of bead, less chance for any leakage.

Why fuss around with the costly production delays, poor performance and other monkey business an inadequate tubing can get you into?

Let Bundyweld show you what tubing features really are!

This multiple-wall type of Bundy® tubing is double-rolled from a single strip. No other like it. It's extra-rugged, easy to form and highly resistant to vibration fatigue. It's thinner walled, yet stronger walled, won't leak under pressure or burst under normal strain.

For help on any application of small-diameter tubing, why not check Bundy Tubing Company today?

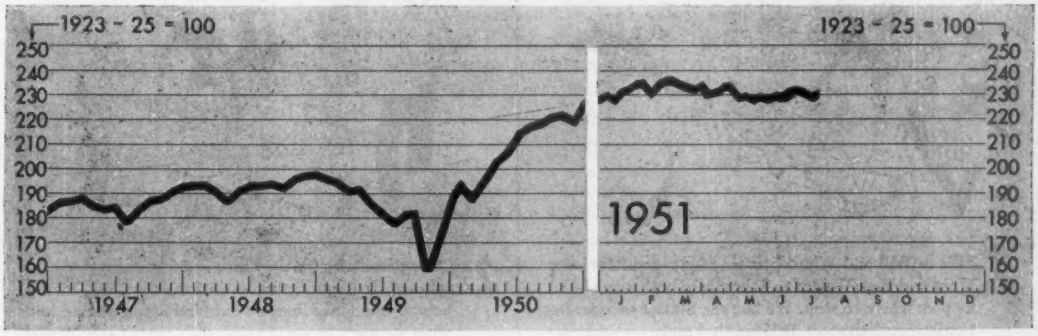
Bundy Tubing Company

DETROIT 14, MICHIGAN

World's largest producer of small-diameter tubing

AFFILIATED PLANTS IN ENGLAND, FRANCE AND GERMANY

FIGURES OF THE WEEK



	§ Latest Week	Preceding Week	Month Ago	Year Ago	1946 Average
Business Week Index (above)	*232.0	†230.7	232.9	220.0	173.1
PRODUCTION					
Steel ingot production (thousands of tons)	2,027	2,037	2,055	1,893	1,281
Production of automobiles and trucks	128,017	†117,747	158,909	187,339	62,880
Engineering const. awards (Eng. News-Rec. 4-week daily av. in thousands)	$59,941	$62,760	$42,795	$53,415	$17,083
Electric power output (millions of kilowatt-hours)	6,975	6,739	6,835	6,186	4,238
Crude oil and condensate production (daily av., thousands of bbls.)	6,166	6,171	6,192	5,538	4,751
Bituminous coal production (daily average, thousands of tons)	1,623	†1,480	1,723	1,512	1,745
TRADE					
Miscellaneous and l.c.l. carloadings (daily av., thousands of cars)	75	78	78	74	82
All other carloadings (daily av., thousands of cars)	54	59	59	57	53
Department store sales (change from same week of preceding year)	–10%	†None	+1%	+25%	+30%
Business failures (Dun and Bradstreet, number)	133	173	180	170	217
PRICES					
Spot commodities, daily index (Moody's Dec. 31, 1931 = 100)	468.7	475.0	488.5	444.2	311.9
Industrial raw materials, daily index (U.S. BLS, Aug., 1939 = 100)	314.7	316.3	333.4	262.9	198.8
Domestic farm products, daily index (U.S. BLS, Aug., 1939 = 100)	356.7	363.0	365.3	352.6	274.7
Finished steel composite (Iron Age, lb.)	4.131¢	4.131¢	4.131¢	3.837¢	2.686¢
Scrap steel composite (Iron Age, ton)	$43.00	$43.00	$43.00	$36.83	$20.27
Copper (electrolytic, Connecticut Valley: lb.)	24.500¢	24.500¢	24.500¢	22.500¢	14.045¢
Wheat (No. 2, hard and dark hard winter, Kansas City, bu.)	$2.31	$2.32	$2.35	$2.27	$1.97
Cotton, daily price (middling, ten designated markets, lb.)	37.87¢	39.55¢	45.25¢	38.25¢	30.56¢
Wool tops (Boston, lb.)	#	#	#	$2.50	$1.51
FINANCE					
➡ 90 stocks, price index (Standard & Poor's)	175.6	173.6	170.4	138.5	135.7
Medium grade corporate bond yield (Baa issues, Moody's)	3.52%	3.53%	3.53%	3.30%	3.05%
Prime commercial paper, 4-to-6 months, N. Y. City (prevailing rate)	2¼–2⅜%	2¼–2⅜%	2¼–2⅜%	1¼–1⅜%	¾–1%
BANKING (Millions of dollars)					
Demand deposits adjusted, reporting member banks	49,892	49,667	50,875	47,728	††45,210
Total loans and investments, reporting member banks	70,085	70,099	70,434	67,875	††71,147
Commercial and agricultural loans, reporting member banks	19,035	19,120	19,216	13,791	††9,221
U. S. gov't guaranteed obligations held, reporting member banks	30,739	30,697	31,186	36,222	††49,200
Total federal reserve credit outstanding	24,605	24,267	24,150	18,475	23,883

MONTHLY FIGURES OF THE WEEK		Latest Month	Preceding Month	Year Ago	1946 Average
Cost of Living (U. S. BLS, 1935 = 100) old basis	June	185.5	185.4	170.2	139.3
Wholesale prices (U. S. BLS, 1926 = 100)	June	181.7	182.9	157.3	121.1
Average weekly earnings in manufacturing	June	$65.44	$64.55	$58.85	$43.82
Retail sales (seasonally adjusted, in millions)	June	$11,865	$12,065	$11,699	$8,358

➡ See page 71.
#Insufficient trading to establish a price. * Preliminary, week ended July 21.
††Estimate (BW—Jul.12'47,p16). †Revised. §Date for 'Latest Week' on each series on request.

1. "We're Will and Winnie, touring kids, and here's our Mom and Pop. We *had* to bring them both along—but *we* pick where to stop. We like the Statler services for tourists much the best. Besides, they make each traveler feel he really *is* a guest.

2. "Our parents think the Statler's friendly *Service-Aide* is grand. In planning trips about the town, she lends a helping hand. She knows what kind of fun we like, and what we want to see. I think she's pretty swell," said Will. Said Winnie: "I agree!"

3. "Hooray," cries Will, "this menu has the things *we like* to eat. And special plates and silver, too. Say, Kids, the Statler's *neat!* They even give us big balloons. Think Pop would like one, maybe? And Mom says they fix formulas . . . but we don't have a baby."

4. "We like the Statler's gift of fruit. It's special—just for us! And wait till *you* try Statler beds—they're super-marvelous! What's more, we let our parents leave to have some fun at night. The baby sitter Statler gets will watch while we sleep tight.

5. Now Will and Winnie shout: "Good-by! We had a lovely stay!" The box lunch mother ordered fixed, is safely packed away. The *Service-Aide* helps Pop with maps. The kids let out a cheer . . . "when traveling with *your* parents—always bring your parents *here!*"

STATLER HOTELS: ***NEW YORK*** • ***BOSTON*** • ***BUFFALO*** • ***DETROIT***
CLEVELAND • ***ST. LOUIS*** • ***WASHINGTON***
STATLER OPERATED: ***HOYEL WILLIAM PENN*** • ***PITTSBURGH***

★

ANOTHER GREAT NEW STATLER • ***LOS ANGELES***
(NOW UNDER CONSTRUCTION • READY FOR OCCUPANCY 1952)

WASHINGTON OUTLOOK

WASHINGTON BUREAU
JULY 28, 1951

A BUSINESS WEEK SERVICE

Take note of Truman's midyear economic report, out this week. It's the work of the Council of Economic Advisers—Keyserling, Clark, and Blough. It's slanted, of course, to put the best light on Truman's leadership. And it's cautious in its forecast, especially on future inflation. But it does give you the official timetable for rising miltary demands—the biggest single business influence for another year, at least.

•

This is the schedule for steel: In the current quarter, direct military needs are taking about 11% of total supplies. This will rise to about 15% in the first and second quarters of next year.

Copper: Currently arms making is taking a 20% bite. In the second quarter of 1952, it will be almost 30%.

Aluminum: Defense production now takes about 30% of the light metal. It will run close to 40% in the first quarter of next year, then ease a bit after that.

•

In all, the big pinch will come in the first half of 1952. Right now about 11% of the economy is being used to build defense. At the peak, around next midyear, the figure will almost double, to 20%.

•

Then an easing off should come. New industrial capacity, now abuilding, will be available for production. And unless a new foreign crisis puts a bulge in defense plans, civilians should begin to get a bigger slice in the last half of next year. Controls should become milder, even if they aren't abandoned entirely.

•

Post-Korea recession is regarded as a possibility by Truman's economic advisers. But with consumer income rising and arms spending taking a big jump—from $35-billion now to $65-billion by next year—the attitude is that any slump will be both modest and short-lived.

•

Are we overexpanding? The Truman forecasters say that we aren't. (So do businessmen—page 19.) They figure that even if war dangers diminish enough for defense to be cut back new capacity won't stand idle. Foreign demands, plus unsatisfied needs at home, would provide a market, they say. A tax cut is listed as a possible stimulant.

•

Fast amortization and other expansion aids will be harder to get (page 120). One reason is criticism in Congress that Wilson has been too open-handed. But more important, many capacity goals are now in sight.

Renegotiation is up in the air because Truman has delayed four months on getting a new board. White House politicians have been slow agreeing on the five members. Many contractors may run into trouble as a result. The new law applies to this year's defense profits. But until there's a new board and new regulations are issued, contractors won't know just where they stand. They may run into a retroactive change of rules.

•

Congress won't get a late summer recess. The plan is to stay on, clean up "must" bills, then adjourn, barring a new war threat.

WASHINGTON OUTLOOK (Continued)

WASHINGTON BUREAU JULY 28, 1951

Three big issues must be faced, not counting the control bill. They are controversial and will hold Congress into October.

•

The tax bill won't get to the Senate floor until late next month. Then it will have to go to conference with the House. The final law will be far short of the $10-billion Truman keeps insisting on. It will even fall a billion or so short of the House-passed $7.2-billion boost. The softening will be on individual and corporate incomes.

Appropriations for fiscal 1952 are badly behind schedule. They were supposed to be enacted before June 30. But not one out of the dozen regular money bills has gone to the White House.

The foreign aid faces a bitter fight. Truman wants $8.5-billion—most of it for military assistance. But Congress is balking on this one. There's doubt now that Eisenhower will come home to put it over. For if he failed, it would weaken him in Europe.

•

Bills left pending when the Big Three are clear will go over until next January. There's no chance for the St. Lawrence Seaway this year, even though Truman has put a defense tag on it. Taft-Hartley act changes are out. And so is any legislation to bolster up fair trade laws. Even the postal rate rise, which almost looked like a sure thing a short time ago, may get wedged in the logjam.

•

A defense program expansion is under consideration by the military. But the final decision won't be in time for congressional action this year (unless the foreign picture grows darker).

Restyling of the Air Force is the prime aim. The new striking power would go largely into the tactical side, which supports ground troops. The planning is big-scale—150 instead of 95 groups. It would cost an extra $13-billion and push military manpower needs to about 4.5-million men.

•

The first test of the Wage Stabilization Board as a disputes settler may come out of the CIO strike at American Smelting & Refining Co.'s plant at Garfield, Utah. Copper is vital to defense, and the strike has been running for a month. At midweek Truman was ready to turn it over to the board for a recommended settlement.

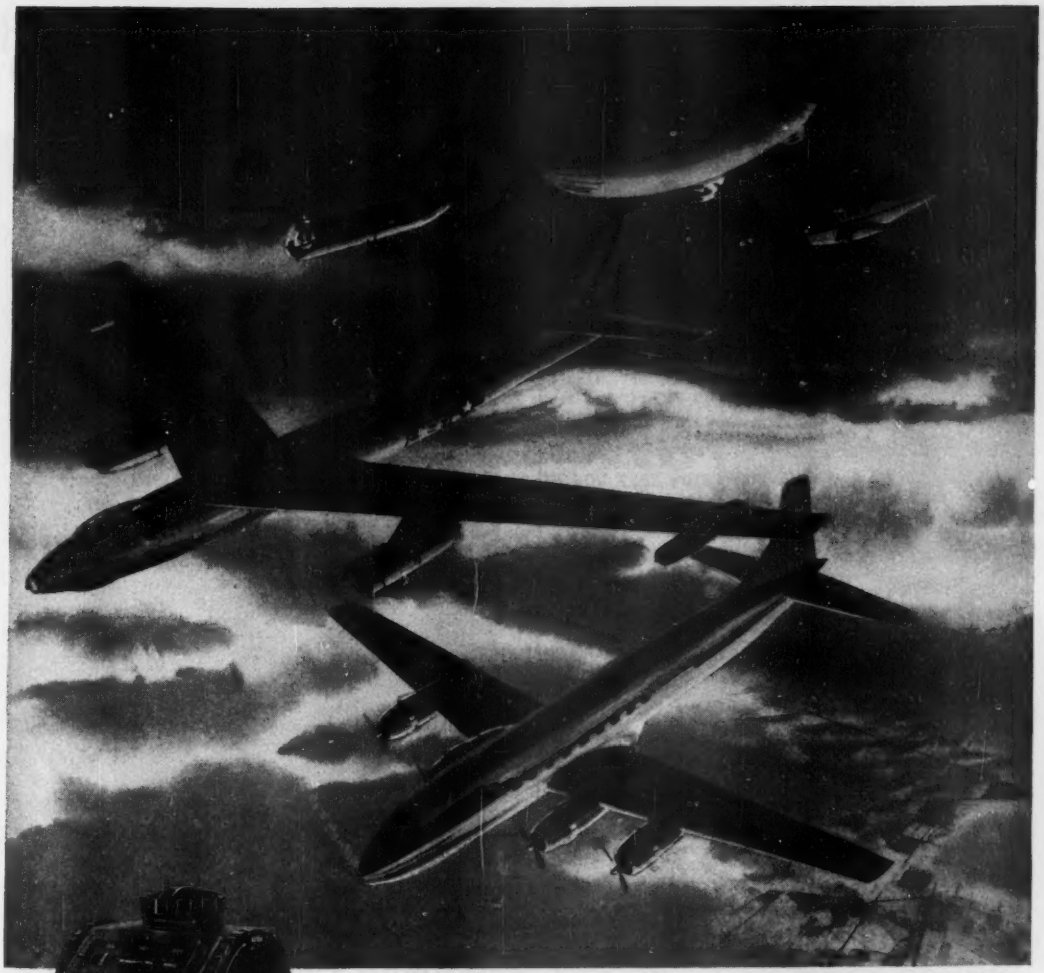
It's a way around the Taft-Hartley law. If the union agrees to work while the wage board considers its case, then no injunction will be sought.

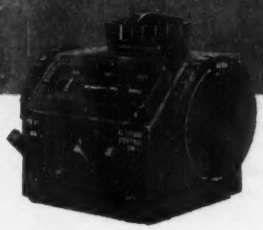
•

Unionization of white collar workers is being plugged by Secretary of Labor Tobin. He told a recent meeting of the AFL retail clerks that union membership not only will help the white collar worker get more pay, but will also make him "a citizen of his firm or factory with a democratic right to a voice in its affairs" and a say "in the way things are run."

•

Rumors of tax scandals have circulated in Washington for years. Neither Congress nor the Treasury ever took the trouble to investigate, except superficially. But now it looks as if the New York and Boston incidents will set off a real inquiry into collectors' offices. There are hints that the disclosures will be political shockers.





Automatic Ace
OF THE AIRWAYS

VERSATILE SPERRY GYROPILOT ON JET FIGHTERS AND BOMBERS, AIRLINERS, EXECUTIVE PLANES, HELICOPTERS AND LIGHTER-THAN-AIR SHIPS

► For widely diversified aircraft the Sperry Gyropilot* is providing consistently smooth, precise automatic flight control under all flight conditions and is making possible automatic approaches through low ceilings in rough air.

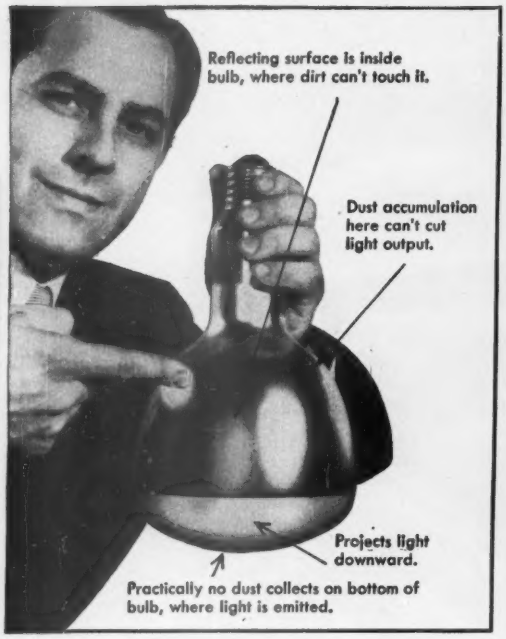
► The flexibility in applying this Gyropilot to all types of aircraft is the result of 10 years' experience in combining precise reference systems with electronic rate circuit techniques and high response servos which accommodate all control situations from lighter-than-air ships to guided missiles.

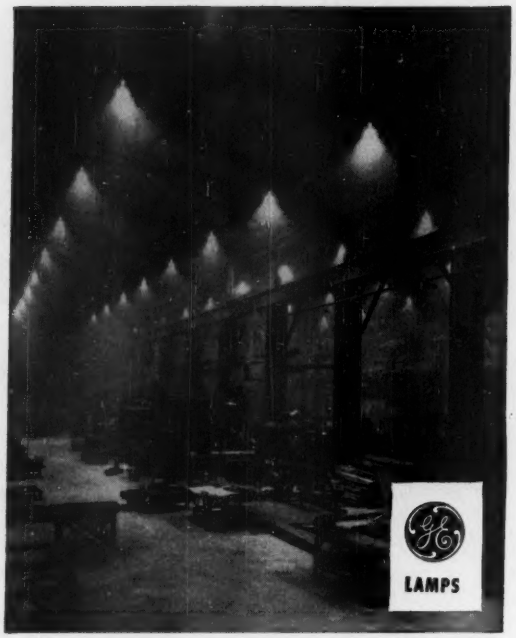
REG. U. S. PAT. OFF.

SPERRY GYROSCOPE COMPANY
DIVISION OF THE SPERRY CORPORATION

GREAT NECK, NEW YORK • CLEVELAND • NEW ORLEANS • BROOKLYN • LOS ANGELES • SAN FRANCISCO • SEATTLE
IN CANADA — SPERRY GYROSCOPE COMPANY OF CANADA, LTD., INTERNATIONAL AVIATION BUILDING, MONTREAL

New High-Powered G-E Lamp for your High-Bay Areas!





General Electric R-52 lamp stays bright in dirt and smoke without cleaning

THIS new General Electric R-52 bulb is specially designed for lighting dusty, smoky plant areas where high-bay mounting makes lamp cleaning difficult—such as foundries, welding shops, steel mills, railroad car shops.

Its high wattage—500 and 750 watts—puts plenty of light on your job from the highest mounting. And its special design prevents reduction of light output due to dust deposits. Photo at right above shows the new R-52 lamps in a new installation at the Gemco Engineering and Manufacturing Company, Woodlawn, Ohio.

You don't need auxiliary reflectors with this lamp. A mirror-like reflecting surface on the inside of the bulb itself projects the light downward. Even though airborne dust and dirt gathers on the sides of the lamp it can't cut down light output. That's because little or no light-obstructing material collects on the bottom surface—where the light is emitted. As a result, you don't have to clean the lamps.

If this new lamp can help solve a lighting problem in your plant call your nearest G-E Lamp sales office.

For a free copy of a new illustrated bulletin, "Planned Lighting for Industry", write General Electric, Lamp Department, Div. 166-BW-7, Nela Park, Cleveland 12, Ohio.

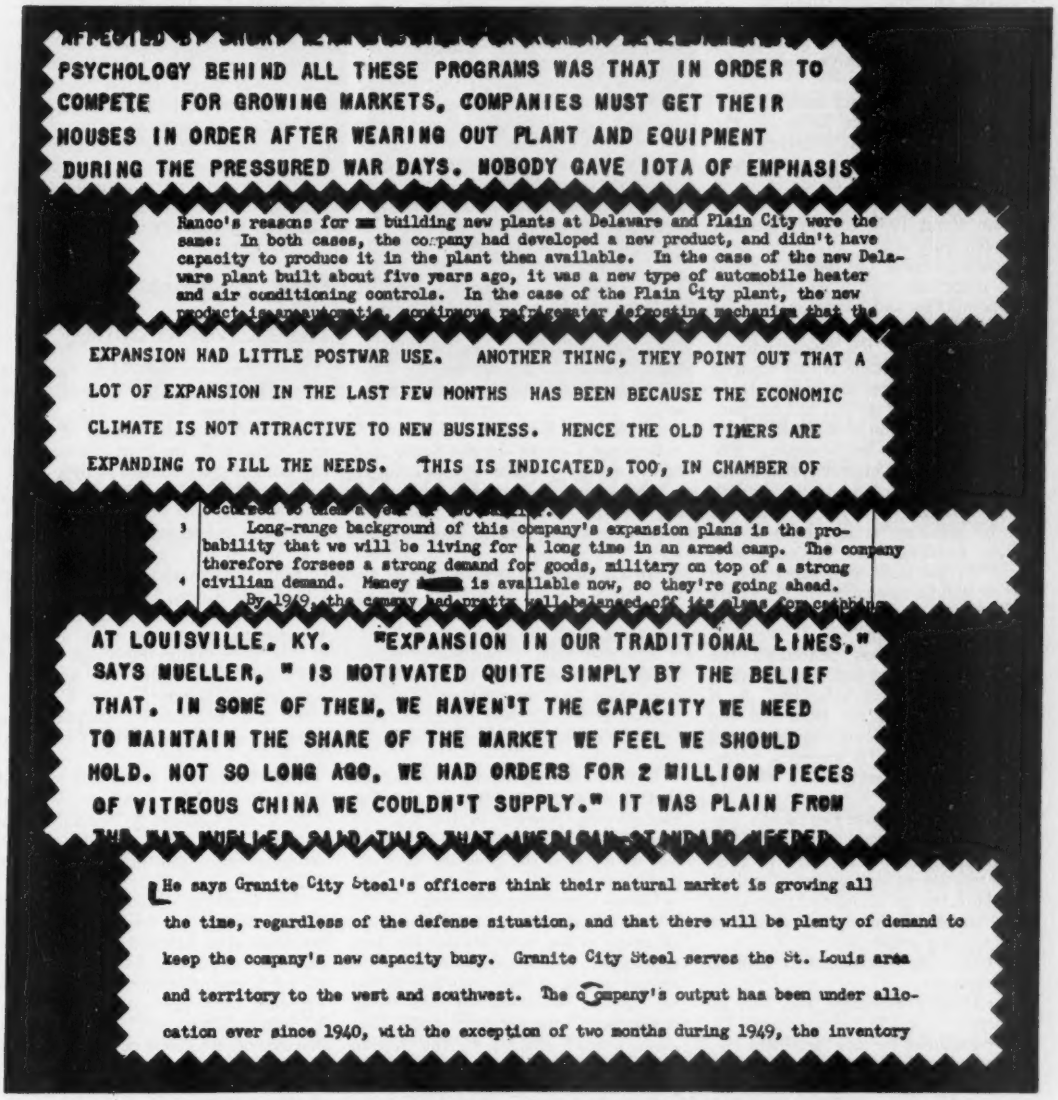
You can put your confidence in—

GENERAL ELECTRIC

BUSINESS WEEK

NUMBER 1143

JULY 28, 1951



REPORTERS turned in answers like these when Business Week told them to interview top businessmen, find out . . .

Why Business Keeps Expanding

On July 14 BUSINESS WEEK said: "Right now business plans for bigger plants and for more equipment are even more ambitious than they were last January. And they are still growing. The slowdown in sales this spring hasn't scared producers a bit. The peace talk hasn't scared them."

One week after the armistice talks started in Korea, three weeks after the first firm talk of truce, these were the key findings of a survey recheck of 50 companies that early this year had scheduled heavy capital expenditures for 1951.

• **Psychology—Why?**—In a factual survey this was the question that was unanswered. The bare statistical bones only

proved what was happening. The reason why management men are driving so stubbornly and energetically for new plants remained obscure. And you need to know the thinking to gauge how long the drive will continue.

This week BUSINESS WEEK asked its reporters to put some flesh on the bare bones, to find the motives behind expansion thinking.

Two main facts stand out:

(1) **Plant expansion today is the product of long-range thinking;** the short-run ups and downs of business have hardly any effect on decisions to enlarge capacity.

From about 1930 to 1945 industry expanded only slowly (of course there was war expansion, but much of it had little peacetime use). At the same time population and income were rising rapidly. The result was that the country's capital plant fell below normal.

Today the realization is that capacity will have to go on expanding for a long time to catch up and to keep pace with the further growth of the economy. Right now the businessman, BW finds, is as much concerned with capacity 10 years from now as he is with needs in 1952 or 1953. In fact, he may be planning as far ahead as the Buffalo building-board executive who said: "We are building a paper mill so that we will be assured of this necessary ingredient at a constant level and price for the next 50 years."

(2) **Expansion has penetrated the whole economy,** not just the consumer-good or end-product industries. As if a pyramid had grown from the top down, capacity is being enlarged at all levels. Out of this is emerging a permanently greater output from all types of industry.

• **Conditioners**—These two factors, perhaps more than any others, underlie the thinking of businessmen in their determination to enlarge capital spending. Directly, or indirectly, they show up in almost all the reasons executives cite for going ahead:

• Growing markets, both national and regional.

• Greater efficiency and cost reduction.

• Facilities for new products.

• Enlargement of existing concerns in light of what some feel is an unfavorable economic climate for starting new businesses.

• The difficulty of stopping expansion once it is well started.

• **National Demand**—Autos are perhaps the best example of an industry committed to the prospect of an expanding national market. Through the 30's, manufacturers expanded hardly at all. After the war, they faced a big backlog, both of overdue expansion and replacement building. Despite some catchup, auto people feel there is, and will continue to be, a growing market. Their conviction is that there will have to be more plant to serve perhaps 1-million more buyers a year than existed in the prewar market.

In electrical power equipment, Westinghouse follows pretty much the same line of thinking. "When you look at the distribution of income and when you study the population that will be coming late in the 1950's and 1960's," an official says, "you can see why we're not going to get caught with undercapacity again—even if it means some temporary overcapacity. The heavy-power-equipment business is certainly a cyclical industry. But the thing to remember is that each peak is higher than the last."

Aluminum manufacturers figure that aside from rearmament the civilian market today is far greater than it was in 1947 through 1949. The thinking is that demand will continue to grow even though deflationary pressures readjust prices of competitive metals much closer to the cost of aluminum.

• **Regional Growth**—In the South, the Midwest, and the Far West, industry is enlarging on the strength of a growing regional market. An official of Tennessee Coal, Iron & Railroad Co. says, "We do not expect the present expansion program to take care of future needs. More plants are coming to the South to use our products. More will come if we can supply them."

And this from a Northwest manufacturer: "The West is growing—in population and in industry. The expansion now under way represents new production facilities to serve expanding industry."

In the Midwest, Inland Steel stresses that its expansion is primarily aimed at the growing demand in the Chicago market for flat-rolled steel. The Korean war didn't start the program, only expedited it.

• **Costs**—Textile manufacturers in the Northwest point to cost reduction and efficiency as the main reasons for their expansions and modernization. "I'd say our feeling in these programs is that we have to modernize or quit trying to compete," one executive said. "Our plans weren't affected by the Korean War and won't be changed by the peace."

Container Corp., which will spend about 10% more on expansion this year and next than in 1950, believes that it has been operating for some time at capacities that weren't efficient. And company executives felt they had waited long enough for costs to decline.

• **New Products**—In chemicals, the big reason for expansion is new products. "What was good on Monday may smell on Tuesday," a Monsanto executive said. "The competitive nature of this business requires a constant search for new and better products, which means new or bigger plants to make them in." Monsanto's attitude now is a "boom feeling mixed with an element of quiet caution."

• **Caution**—On the West Coast, particularly around the Los Angeles area, there are some signs of caution about rapid expansion. One manufacturer of hard goods admits frankly that he is worried about a sales slump. He points out that all his expansion is due to government orders. A New York executive, who also has qualms, admits there's nothing he can do about them. "We're so committed to our expansion program now that we couldn't back out."

Ford, du Pont, Others Take Over a Bank

Some well-known U.S. business names are taking a collective venture in international finance. This week a group that includes Henry Ford II and Nicholas R. du Pont announced it had bought stock control of little International Bank of Washington, D. C. The bank accepts no deposits, has always been interested in foreign trade.

Others in the buying group: Ernest C. Kanzler, board chairman of Universal CIT Credit Corp., Detroit; Charles S. Payson, New York financier; George T. Weymouth, associated with du Pont in the Wilmington brokerage firm of Laird & Co.; Wendell W. Anderson, president of Bundy Tubing Co., Detroit; and Willard F. Rockwell, Jr., president of Rockwell Mfg. Co., Pittsburgh.

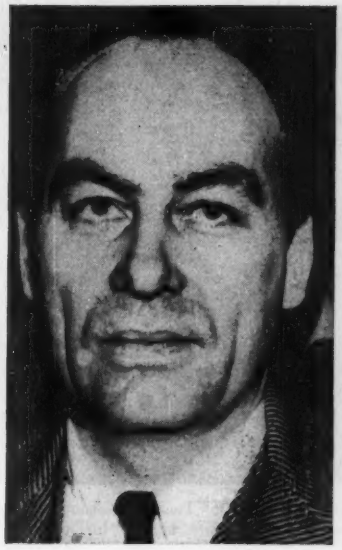
• **Old Hands**—The group was rounded up by T. Reed Vreeland, president of New York's Cement & General Development Corp., which specializes in developing new industries abroad (page 132).

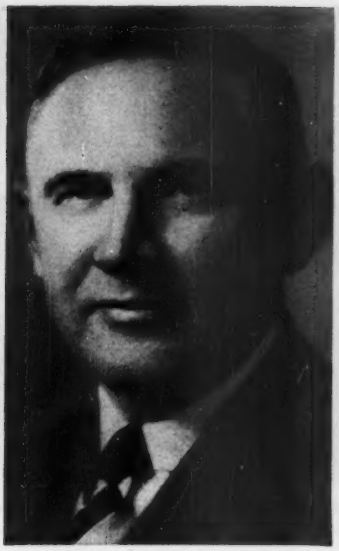
But Vreeland didn't want to start a new bank. When he saw a chance to buy control of International, Vreeland called on his personal friends. "I wanted to get a representative group of businessmen from different parts of the U. S. to go in with me," he says. "Their investments are purely personal. But the bank may be able to do business later on with their companies' foreign-sales departments."

The Vreeland combine purchased "more than 50%" of International's stock from founders John R. and Austin C. Waller.

• **Short-Term Financing Goal**—International Bank was founded in 1919 to finance world trade.

Before the management changed hands, about $485,000 in nonliquid securities were transferred to the old stockholders. That left about $460,000 in cash and liquid assets for the bank.





GEORGE GALLUP and Claude Robinson have convinced advertisers they can tell . . .

How Good Is an Ad, Really?

Very quietly, researchers Gallup and Robinson have picked up an impressive list of clients for a new system of measuring the impact of advertising copy.

Last week was a holy terror for advertising agency men—and just when the excess profits tax was supposed to be making advertising look cheap as dirt.

• Disgruntled advertisers were shifting agencies right and left—Schenley, Packard, and Lydia Pinkham, for instance. (Advertisers have merchandise that must move; they have to work harder to keep profits up.)

• The scary news leaked out that a formidable pair of researchers, George Gallup and Claude Robinson, had sold a formidable list of advertisers on a new method of measuring the impact of ads.

• **Last Time**—Advertising agents never did care much for clients who lean over their shoulders telling them how to write their copy. Last bad time they had that way was 10 years ago when the Townsend brothers came to town with their package of points for evaluating copy and sold it to Quaker Oats, among others. Albert D. Lasker, the head of Lord & Thomas, made short work of that by throwing Quaker Oats out of the agency. At any rate the Townsends gave up, and everyone went back to business as usual.

The new partnership of Gallup and Robinson seems on the way to a long and prosperous life in its brand-new building in Princeton, N. J. Gallup is inventor of the reading-and-noting method of measuring advertising effectiveness now used by the Starch survey; he's founder of the Gallup poll. Robinson patented the first radio audimeter and founded the Opinion Research Corp.

• **Get the Point?**—This pair offers at least part of the answer to the question that has long beleaguered every thoughtful advertiser: Did the customer get the point of the ad, and if so, what point and what does he intend to do about it? They call their system the impact method. "I am bold enough to say," wrote Gallup in the scholarly Journalism Quarterly, "it will change the character of advertising as much in the next 20 years as the readership method has in the last 20."

In essence, this is their technique: Within a week of the newsstand release dates of Life, Saturday Evening Post, and McCall's, specially trained interviewers call upon 200 women readers of McCall's and 400 men and women readers of the two weeklies.

With the magazine closed, the respondent is asked whether he read that issue and is required to prove it by describing in some detail at least one article in it. If he qualifies he is given cards with a list of names of advertisers, not all of which were in the magazine. Which ones did he see? What reasons did the advertiser give for buying?

This part of the interview is taken down verbatim and passed on to the client without change.

• **Clients**—Gallup and Robinson have been working on their method since 1945. The experiments were underwritten in part by Chrysler, who was the firm's first client—a notable circumstance when you consider that the automobile industry never was a rootin' tootin' advertiser like the food industry.

Sun Oil came in second, and then General Electric. Today there are 27 clients in all including, among others, Ballantine's, Bauer & Black, Brown Shoe, Corn Products, Firestone, Goodrich, Kellogg, Kraft, Nash-Kelvinator, National Biscuit, Republic Steel, Schlitz, Alexander Smith, Hiram Walker, Westinghouse, Prudential Life.

Gallup and Robinson collect their fee from the advertiser, not the agency. It's a fairly stiff one, based on the client's advertising appropriation.

• **What Works**—By now, the pair have gone over enough ads with enough people to reach some interesting conclusions. Examples:

• It doesn't do much good to yell about being the first, the finest, the biggest, or the best.

• What Gallup and Robinson call the bottle-and-glass school of whiskey advertising comes off a very poor second to the livelier Calvert man of distinction or Four Roses' flower in an ice cube.

• Ad-y ads (G&R's term for an ad that has everything the art director ever heard of) do even worse. Trick headlines and typography, printing on tint blocks, all look like hard work to the reader.

• Endorsements by celebrities are actually irritating to the reader unless they are believable. But a recent Rayve ad using a testimonial from Mary Martin in the hair washing scene from South Pacific hit nearly an all-time high.

• News—any kind of news—scores even higher, especially news about the product.

If 30% of the readers got the point of your ad, that's very good; 9 is about the general average, and there are many at 1 or 2.

• **Plans**—Gallup and Robinson are checking television, too, but not in a big way as yet.

One thing they feel certain they've found the answer to is the interviewer who stays home and fakes the questionnaires himself. The actual reactions of readers to ads are so peculiar that nobody, but nobody, can fake them. One reaction to Rayve's ad: "There was a girl washing her hair, and she had on sailor clothes for some reason. It seems like she washed her hair often."

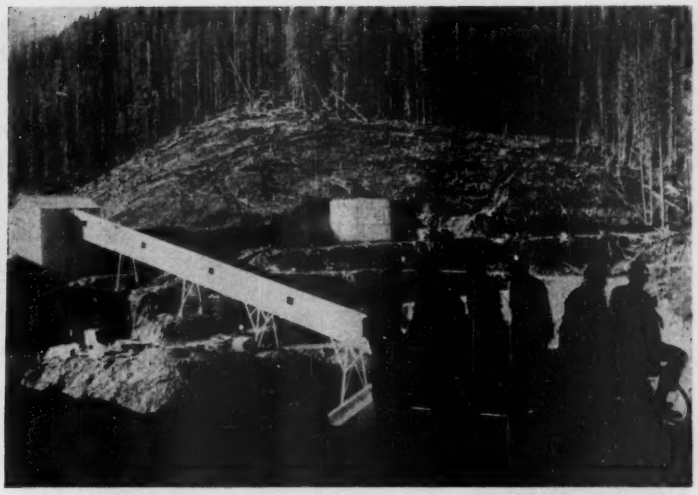
PAYOFF. But before postmistress could tack up new name of town, it took . . .

. . . PLANS. Superintendent Meen (left), manager Douglas study model of mine.

. . . ROADS. Trails and wagon roads had to be converted into modern highway for trucks.

. . . A NEW TOWN. Cobalt now boasts 425 residents, will hit 1,000. Workers commute to mine and mill by company buses.

. . . PIPE. This line carries mill tailings uphill to mine to replace ore as it's mined.



. . . AN ORE MILL, hauled piecemeal from nearest railhead, 108 miles away. Here miners in an ore car pass the mill on their way into one of the horizontal shafts.

After 8 Years—U.S. Cobalt

Because it fits right into an age of electronics and jet propulsion, industry and defense planners are still singing the cobalt blues (BW—Jul.21'51,p110). But this month our first major domestic source of cobalt went into production in Idaho.

Up to now, more than 90% of our 8¼-million lb. of cobalt a year has come from imports, chiefly from Belgian Congo. For years the only domestic supply was a scant 600,000 lb. recovered by Bethlehem Steel Co. from its iron mines at Cornwall, Pa. (BW—Feb. 24'51,p70). National Lead Co. recently revived a project to recover 500,000 lb. annually from lead, zinc, and nickel ores at Frederickstown, Mo.

Now comes Calera Mining Co.'s Blackbird mine at Forney (renamed Cobalt), Idaho. Calera expects to turn out 3-million lb. of cobalt in 1952. That's 36% of 1950 consumption, 23% of the 1953 target of 13-million lb.

• **From Scratch**—Newly named Cobalt, Idaho, grew up in primitive Salmon National Forest as a result of eight years' work by Calera.

Calera's advance guard had to battle winters that last six months and run as low as 25 below. It had to turn wagon roads into passable highways and bring a modern ore mill piecemeal 108 miles from the nearest railhead. It had to build a town to house mine and mill workers. Cobalt now has a population of 425, with 1,000 predicted by spring.

The government helped by building 42 miles of highway. And Idaho Power Co. brought lines 98 mi. from Montana at a cost of nearly $1-million.

Calera is now mining and milling ore at 600 tons a day, soon to be increased to 1,000 tons. The concentrate is being stockpiled at Cobalt until the refinery at Garfield, Utah, near Salt Lake City, is completed. The government has contracted to buy Blackbird output at $2.10 a lb.

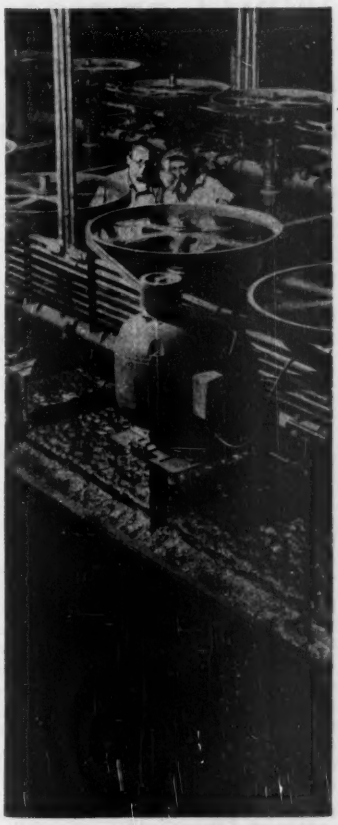
• **Skyrocket**—Joy over Calera's annual 3-million lb. of cobalt is dimmed only by the fact that demand is skyrocketing. Our 1950 consumption doubled the 1948 figure; our 1953 consumption will be 57% higher than 1950.

Cobalt is no late-bloomer among metals. It has long been used to give color to glass, whiteness to chinaware, hardness to tool steel. But in the past 10 years it has become a particularly strategic material. Here's why:

• Alloyed with aluminum and nickel (alnico), it makes the most powerful permanent magnet known for use in radar, radio, television, motors, guided missiles. Cobalt is also used in electronic tubes.

• Cobalt has a property called "red hardness." This means it is able to retain its hardness at temperatures as high as 1,000C. It's just what engineers need to toughen other metals in jet engines and gas turbines.

• **The Pinch**—While demand goes up astronomically, it's hard to increase our supply. We can't boost our imports much—we're already gobbling up 60% of world production—though minor increases are expected from Canada, Morocco, and Northern Rhodesia. That's why we are turning to recovery of cobalt from other domestic ores.



ORE is separated, stockpiled temporarily.

CONTROL CHIEFS DiSalle and Johnston await House action, wondering . . .

Why Congress Acts That Way

A year ago Congress forced Truman to take control powers he didn't want. Last week it was just as busy shaving those powers away with one hand, restoring them with the other.

When they vote on key issues these days, congressmen are taking the long view—an 18-month view toward the 1952 election.

That's the explanation for the kind of controls bill that's being sent to the White House. And it's the key to the erratic gyrations of the House of Representatives last week in acting on it.

Here's what happened in the House:

• The original bill satisfied Administration demand for strong controls.

• The House sat as a committee of the whole to consider amendments. It amended the bill half to death.

• The House went back into plenary session and restored many teeth to the bill. It actually wound up with a pretty strong controls bill.

There's a quick answer to the disparity between House action as a committee and its action as a House: Committee votes are not publicly recorded; House votes are by roll call. House members could thus go along with pressure groups in voting on amendments—the lobbyists alone would keep tabs on how they voted. Then when it came to standing up and being counted on roll call, they could bolster their public record.

• **Horned Dilemma**—The uncomfortable dilemma of the congressman today is: What kind of vote will look good in 1952?

• Will we be in a shooting war by election day? If so, the congressman wants a record 100% in favor of all-out preparedness—military buildup, tough taxes, tough controls.

• Will we be in a period of international calm instead, with a strong undercurrent of back-to-normalcy thinking? If so, he wants to show he stood foursquare against controls and for slicing the fat from military spending, for a balanced budget, for a tax ease-up.

Making such a decision is enough to make any man squirm, when his career can be nipped by a wrong guess.

• **Mandate**—Last fall, after the Korea outbreak, the wave of public spirit left congressmen no doubt about which way to vote. They forced Truman to take a strong controls law he didn't want then. But now there's no such clear-cut public feeling.

Truman, Wilson, Johnston, and DiSalle have been exhorting the consumer to protest the "scuttling of price controls." But the consumer hasn't shown much response.

With Truman ineffective, his own party leaders in both houses publicly bucking him on controls, and the public apathetic, congressmen can go a long way toward making a record that satisfies their own special pressure groups. Thus the House last week:

• Allowed wholesalers and retailers their customary markup.

• Allowed mail-order sellers to add c.o.d. charges to their prices.

• Voted that each proposal for condemning property for defense purposes must be O.K.'d by the armed services committees of both houses.

• Spelled out specific limits in Regulation W on down payments and terms for new and used cars, consumer durables, furniture, and rugs. Authorized a trade-in to be counted as all or part of the required down payment.

• **Consumers Are Voters, Too**—But having run through such a list of special amendments and the obvious farm bloc proposals, the majority of House members decided they would also vote for things the consumer would like. For example: They refused to cancel the beef price rollback already announced.

This is axiomatic: You don't vote for anything that may be held against you in the voting booth.

By the same token, House members reversed their earlier position when it came to public roll call vote on such issues as: a 120-day freeze on all prices and wages as of July 7, a formula allowing all costs and reasonable profit under any price ceiling, assurance of a fair margin to packers on each species of animal processed.

Cheaper Money

There's more cash to lend, and demand for it is lessening. Rates have leveled off, may turn down next year.

The cost of credit has stopped rising. There are signs that interest rates may, in fact, be on the way down. Declines from the high levels reached this spring may not be large over the next few months, but by next year rates should be back fairly close to pre-Korean levels—unless rising prices again push FRB toward a strong anti-inflation program.

• **What's Braking Rates**—Responsibility for the turnaround is being given to all or some of these factors:

• The voluntary credit restraint program set up by financial institutions under sponsorship of the Federal Reserve Board. Inflation-producing and other nonemergency loans are being rejected, so there's more money for approved loans; and when money supply is big, money prices drop.

• A sharp drop in inventory accumulation resulting in curtailment of demand for inventory loans. There is

even some liquidation freeing cash for further lending.

• An unexpectedly low volume of borrowing to finance defense work. Reason: lags in production and large cash reserves of business.

• The government is now decreasing its cash balance and so increasing private deposits; business has less need to borrow, banks have more cash to lend.

• Shunting of funds from mortgages to other sectors of the money market.

• **What Will Reverse Rates**—Next year, declining rates are likely. Deficit financing and further disappearance of investment outlets will make for a substantial excess of money over demand. Result will be easier commercial, mortgage, and government-interest rates.

• **Commercial Credit**—In the nine months ending Mar. 31, commercial borrowing increased by 5.5-billion; the great bulk of the money went to finance an enormous expansion of inventories. But during the second quarter, efforts of businessmen to liquidate reversed the trend. Dealers and processors of food, liquor, tobacco, and other commodities reduced inventory loans by a whopping $700-million during the three-month period.

Prime lending rates of banks have not yet declined, but last week the biggest dealer in open-market commercial paper shaded his rate on short-term "best names" notes by ⅛%.

With bank loans dropping—at a season when volume usually rises—bank rates might be expected to follow suit. But the second half of the year is traditionally one of loan expansion. So seasonal firming will probably offset inventory liquidation—at least enough to keep rates from sagging.

Early next year, however, seasonal declines will be setting in. Unless consumers go on another buying spree before that, inventory liquidation will probably still be going on.

• **Mortgage Money**—It seems certain that the cost of mortgage credit will be moving down again in the next few months. Biggest reason: materials shortages and Regulation X—the curb on housing credit—will cut the volume of building and, hence, the demand for mortgage money.

There will be an increase in supply, too. Fannie May—the Federal National Mortgage Assn.—has earmarked a big part of its funds, on easy terms, for defense-connected housing.

• **Government Borrowing**—In the past few weeks, the rate on three-month Treasury bills has moved somewhat lower—even though the Treasury has increased its offerings by $200-million a week. Corporations with large undistributed profits and tax reserves have been liking the yield and the liquidity.

End of TV Freeze Is in Sight

Ban on building of new stations may be lifted soon as new frequencies are opened up. Big problem is whether materials shortages will cause building plans to run into snarls.

The television industry last week heard some news that sounds so good that it doesn't believe it. Wayne Coy, chairman of Federal Communications Commission, told a Senate committee that the FCC might lift the three-year-old freeze on new TV stations by the end of September.

• **Change in Plans**—Coy's optimism over lifting of the freeze is based on a significant change in FCC plans. Originally, FCC aimed at following its usual procedure of holding oral hearings, city by city, on frequency allocations. Now it has decided to drop that routine, make its decisions instead as the result of "paper hearings"—written comments from interested parties.

Such a procedure would be the only way to get a freeze thawed in a hurry. Already FCC has over 400 applications for new TV stations in its files. Coy guesses that as soon as a decision to lift the freeze is made it will get between 400 and 500 more. Since FCC can't give licenses to everyone—especially in the presently used VHF (very high frequency) bands—it wants a safe mechanism to keep the issue from bogging down in the courts.

• **Shortages**—Meanwhile, a lot of gloomy people in the industry figure that short-range it isn't going to make much difference whether the freeze is lifted or not. The reason is that things have changed a lot since FCC clamped down three years ago—specifically, the U. S. is engaged in a fair-sized defense program. That means shortages.

Just now the electronics industry is really beginning to feel those shortages. Military orders have taken up so much production-line bulk that RCA's big Camden TV plant has switched over entirely to military output.

• **Transmitters**—And the materials squeeze may be even tighter in transmitters—much more complex pieces of equipment—by the time the freeze goes off. On the other hand, there's a good chance that the government will regard TV as essential enough to give it materials allocations. And in any case, manufacturers already have some complete transmitters in warehouses, just waiting for the freeze to lift.

Another bottleneck is building materials for studios, towers, and other housing. But the National Production Authority is sure to give TV some priorities here, too. All of which adds up to this single fact: Once the freeze goes off, at least some new TV stations will be built.

• **Blunder?**—To the layman, all this fol-de-rol that has had the whole television situation in an uproar for so long looks like a colossal blunder by a bumbling FCC. It's by no means that simple. Five years ago, you could have picked up excellent odds that television in the average home was as far away as summer vacations on the moon.

As a result, FCC had every reason to believe that it was being more than generous when it allocated 12 channels in the VHF part of the spectrum for commercial TV broadcasts. But nobody—including the scientists—had reckoned on U. S. industrial ingenuity.

• **No Alternative**—By mid-1948, there were a little over 500,000 TV receivers in people's homes. Nearly 100 transmitters had been built or were going up. Suddenly it became clear that unless something were done there would be many times as many transmitters as the VHF band could hold. FCC had no alternative: It slapped the freeze on new licenses until it could resurvey the situation, find more room in the spectrum for new stations.

FCC's main problem was that the only other available space was in an area far above the VHF range, in the UHF

JET FIGHTERS destined for North Atlantic Treaty countries are loaded aboard the U. S. S. Corregidor at Port Newark, N. J. The planes are F-84E jets, and the Corregidor is a baby flattop recently demothballed by Atlantic Reserve Fleet.

(ultra high frequency) area. And a lot of technical work had to be done to perfect successful transmission and reception on these frequencies.

• **Other Problems**—Then color television suddenly crowded so far into the picture that FCC felt it had to do something about that before it acted on the freeze. After months of haggling and millions of words of testimony, FCC finally made a decision in favor of the Columbia Broadcasting System (BW—Oct.7'50,p26).

• **Education Enters**—After this, it had one more thing to cope with: educational television. This also related to the freeze and frequency allocations, because educational groups clamored for FCC to give certain channels to noncommercial, strictly educational stations. Strongest advocate of this was one of the commissioners, Frieda Hennock. Now the educational broadcasters have probably lost a lot of the strength behind their cause—because Miss Hennock has been appointed to a federal judgeship and is leaving FCC.

But some experts expect at least a few allocations to the educators. What they will be able to do with them after they get them is another matter. It costs $100,000 at the very minimum to build a TV station. Few educational institutions have that kind of money, could only do it if they got an endowment specifically for that purpose.

• **Long-Range View**—FCC takes a long-range view on this matter. It figures that some day the U.S. could react violently to some of the commercial programming and demand higher-quality stuff. At that point, FCC wants to have some channels open for stations in the educational field.

But that doesn't mean there won't be plenty for commercial stations. FCC has just announced that it will open 70 UHF bands. With the 12 VHF bands already functioning, that will make a total of 82. FCC figures that will take care of around 3,000 stations—more than enough, probably, for the whole U.S. And there might not be that many for about 15 or 20 years.

• **Allocations Troubles**—Even when it finally thaws the freeze, FCC won't be rid of all its headaches by any means. It will have to be pretty arbitrary in fixing allocations—and that's going to make a lot of applicants furious. Everybody wants to be in the VHF band for two reasons: (1) All sets now in existence are built only for VHF and can receive programs here without converters; and (2) the range of UHF stations is some 15 miles less than VHF—which means less audience.

But whoever gets UHF allocations will have to take it and like it. And there's little doubt that they will like it—if past experience with the growth of TV is any criterion.

New Try on Delivered Prices

Proposed legislation would write into law the Supreme Court's January interpretation of the Robinson-Patman law on delivered pricing and price discrimination.

The furor set off when Congress passed the Robinson-Patman act back in 1936 hasn't yet subsided. The ambiguously worded law stated that price discrimination is unlawful, but that adjustments may be made "to meet an equally low price of a competitor or the services or facilities furnished by a competitor."

• **Case History**—In 1948 the Supreme Court took the "price discrimination" clause all the way: In the Cement Institute case, it upheld the Federal Trade Commission's decision that basing-point systems curtailed competition and resulted in price discrimination (BW—Jun.12'48,p74). That decision cast doubt on the legality of any pricing system in which delivered prices were quoted.

Last year Congress tried to put through the O'Mahoney bill—aimed to tell business where it stood on delivered pricing and freight absorption. But President Truman vetoed the bill (BW—Jun.24'50,p25).

Then, early this year, the Supreme Court upset another FTC ruling—in the Standard Oil of Indiana case. The court held that separate prices to different customers are O.K. if made in good faith to meet competition (BW—Jan. 13'51,p26).

Standard had been selling gasoline to four large Detroit customers at prices lower than it sold the same gasoline to small retailers in the area. Standard claimed it had to discriminate in favor of the big customers to meet a competitor's price.

FTC held that the "good faith" defense was O.K. as far as it went. But after good-faith meeting of competition is established, the commission argued it could still hand down a cease-and-desist order against a seller if it turns out that the seller's price discrimination "substantially lessens competition or tends to create a monopoly."

The court said: If this defense isn't a phony, if Standard actually is meeting the lower price in good faith, then Standard can't be hung for price discrimination under the Robinson-Patman act—regardless of the effects.

• **Congress Tries Again**—Now a new law, designed to clarify the situation, seems near final approval in Congress. The Senate will vote on it next week.

Actually, the bill is a rewrite of the ill-fated O'Mahoney bill. The new legislation—S. 719 in the Senate and H.R. 2820 in the House—would write into law the Supreme Court interpretation of the Robinson-Patman law against price discrimination.

• **How It Reads**—Here's the text of the Senate's amendment to the Robinson-Patman act:

> In any proceeding involving an alleged violation of this section, it shall be a complete defense to a charge of discrimination in price or services or facilities furnished for the seller to show that his differential in price, or his furnishing of greater service or facilities, was made in good faith to meet the equally low price of, or equally extensive services or facilities furnished by, a competitor: provided, that a seller shall not be deemed to have acted in good faith if he knew or should have known that the lower price or more extensive services which he met were in fact unlawful.

The House bill contains this language, plus an additional provision that would insert the "good faith" defense into the FTC act ban on all unfair methods competition.

The court's interpretation is right in line with the views of many businessmen and congressmen. They've been pushing the fight for a new pricing law and want to get the court's 1951 decision nailed into the law itself.

• **Small Business Opposition**—But the small business bloc is lining up against them. The leaders—Wright Patman in the House, and Long, Kefauver, and Douglas in the Senate—claim that the present proposals go beyond the Supreme Court decision. They say that the net result would be to make it impossible for FTC to pin a charge of price discrimination on any seller—all the seller would have to do is make out a case of meeting a competitor's lower price, and it would be impossible for FTC to prove that he was not acting in good faith. By using this defense, they argue, it would be perfectly possible for the steel and cement companies to go back to basing-point pricing.

• **The Odds**—Chances for House passage are good; but at this stage of the game, best guess is that the conferees would take only the Senate language—all of which brings up the possibility of a Truman veto.

And the opposition to the law has a card up its sleeve: It can tell Truman that if he vetoes the bill as they ask he really takes nothing away from the sponsors of the bill. The sponsors say that all their bill does is write the court's interpretation right into the law itself.

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BUSINESS BRIEFS

Did rainmakers start the floods in Kansas and Missouri? "It certainly is a possibility," says GE's Dr. Vincent J. Schaefer, developer of cloud-seeding methods to induce rain and snow. He recommends a federal study to see if cloud-seeding is responsible for the floods and, if so, that Congress consider "some degree of control."

•

Peace may come to Panagra now that Civil Aeronautics Board has revoked its tentative approval of an interchange agreement with National Airlines that had deadlocked Panagra's parent companies, Pan American and W. R. Grace. Grace directors wanted National to link South American flights with New York; PanAm favored an agreement with Eastern Air Lines. Now Grace says it won't fight a deal with Eastern if that's what CAB decides.

•

Akron, Canton & Youngstown R.R. dropped coach service on its 170-mi. line between Mogadore and Delphos in northern Ohio. Traffic had dwindled from an average of 70 passengers per train to two—less than enough, says the road, to cover the cost of sweeping out the coach on each of two daily trains.

•

Saws stopped sawing for the last time in the one-industry town of Nahma, Mich. (BW—Apr.28,51,p62). The town can still be yours—for $250,000.

•

The Kaiser interests won't be allowed to finance their defense projects with the money that RFC loaned to Kaiser-Frazer Corp. to build cars. RFC's Symington told Henry Kaiser he would have to pay the $2.5-million for Chase Aircraft Co. (BW—May26'51,p21) out of his own pocket; that if the project panned out after six months, K-F could buy in at the purchase price plus interest.

•

Tit for tat: If federal agencies don't comply with Vermont's law and withhold state taxes from their employees' incomes (BW—Jul.21'51,p30), Vermont's tax commissioner warns that he will "sequester" federal withholding taxes due the U. S. on incomes of Vermont state employees. He'll keep this up until he collects what's due Vermont from some 4,000 federal employees in the state.

•

Vanderbilt University bought Wilson Athletic Goods Mfg. Co., Tullahoma, Tenn., for $300,000. Purpose was the same as when Vanderbilt bought Textron's Charlotte (N. C.) mill on June 29: "to accrue tax-free income."

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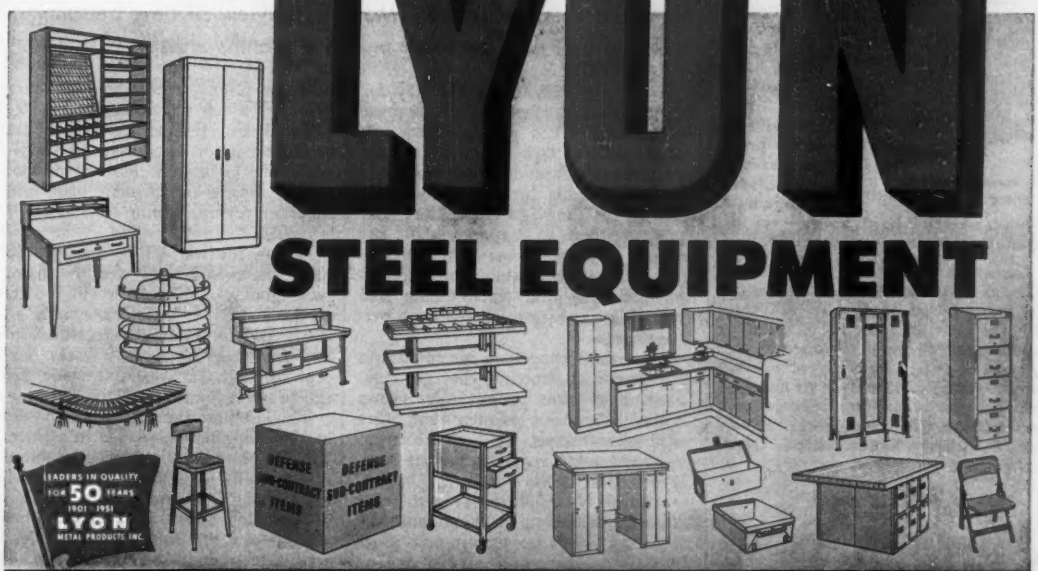

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LABOR

PACKINGHOUSE WORKERS want to get away from "hourly rate thinking."

Meat Issue: Annual Wage

To skirt wage curbs, packinghouse union revives demand for guaranteed yearly pay. Move is preview of new bargaining issues to be raised by other unions in months ahead.

Wage regulations pave the way for unorthodox labor demands. Restrained in what they can get in direct pay gains, unions take up determinedly what normally would be side issues.

This accounts for the phenomenal increase in nonwage labor costs that employers have had to meet in the last decade. Vacation pay, shift differentials, pension plans, welfare programs all got their big push when unions had difficulties in bargaining for cents-per-hour raises.

Once these fringes are cemented into the labor cost structure, they get regulated, too. Thus present rules clamp ceilings on pension payments and other established fringes. To beat the curbs, demands not covered by present regulations must be developed.

• **Annual Wage Issue**—Present wage controls, therefore, will undoubtedly bring employers up against new issues in collective bargaining. Swift & Co., the big meatpacker, is already facing one that other companies may soon be meeting seriously for the first time. It is a demand for an annual wage.

An annual wage is not a brand-new issue for CIO's United Packinghouse Workers, which represents some 150,000 workers in the industry. UPW has been after it for more than 10 years—ever since George A. Hormel & Co. put an assured-employment plan into effect in Austin, Minn. (BW—Oct.19 '46,p92).

During the war UPW managed to get a guaranteed work week in major packinghouses. The worker who reports on the first day of a week is assured 36 hours' pay for the week—regardless of how few hours he actually works. Except for that, UPW hasn't made any real progress toward its big goal.

The last time the issue came up was in 1947; negotiations ended in a truce. The "Big Four" packers—Swift, Armour & Co., Wilson Packing Co., and Cudahy Packing Co.—agreed to the need for a "feasible" annual-wage plan. They said they would conduct independent studies of ways to set up such a plan.

UPW has talked guaranteed-wage plans since then, but only vaguely. Last week it got specific.

• **Swift Demand**—UPW's president Ralph Helstein told Swift that in its

contract reopening, set for Aug. 11, the union will mean business in its demand for an annual wage. It wants a guaranteed $3,000 a year for workers in the lowest wage brackets, correspondingly more for those with higher hourly rates.

The $3,000 annual wage for workers in the common-labor grade is based on employment for 52 weeks, or 2,080 hours. It would not include overtime pay, night differentials, or any other forms of premium pay—just straight hourly wages for an eight-hour day and a 40-hour week.

Common-labor rates in the industry now vary from $1.46 to $1.51. Workers paid at those rates for a full 2,080-hour year would draw $3,000 to $3,140. So, theoretically, no wage increase is being asked for—and no difficulties would be encountered with the Wage Stabilization Board, UPW thinks.

• **Costs Would Rise**—But packinghouse workers seldom work a full 52-week year. Because of the off-and-on nature of the industry, workers averaged about 1,675 hours last year, earned only $2,280. If they work the same number of hours this year at 1951 rates, they will draw about $2,443. That's substantially less than the proposed $3,000 guarantee.

The union says, however, that "it's a matter of mathematics," that companies would have to give the equivalent of a 27¢ hourly raise, under the $3,000 plan, unless they could use workers "more advantageously" than in 1950.

• **Other Demands**—The annual-wage demand by UPW caused the most stir—but there were two "sleeper" demands in UPW's bargaining list for packers. The union also called for: (1) a social-service fund, financed by the companies on a monthly per-employee basis; and (2) a cost-of-living bonus to be paid monthly.

The social-service fund would be used, the union says, to set up a community center in each packinghouse area. There, workers and their families could get free:

• Medical and dental diagnostic clinic services.

• Guidance from experienced social workers on home problems and in applying for various forms of government aid.

• Legal aid on personal and family problems.

• Loans for special emergencies.

• Consumer education in buying practices, food and diet planning, etc.

• Recreation, including play and camp facilities for children in crowded areas, and community recreation and rehabilitation work for older persons.

The union comments that the c-of-l bonus it wants wouldn't be the same as an "escalator"—since the annual wage, or wage rates, wouldn't be affected by the bonus.

On Pre-1950 Contracts: Chaos

The board dismisses 21 unfair-labor-practice orders after voiding nearly 5,000 CIO contracts. Still in doubt: Can CIO employers who have complied with NLRB orders go back on them?

Last week National Labor Relations Board voided more than half of CIO's union shop contracts. This week you could begin to feel potent repercussions from NLRB's ruling. NLRB had ruled that nearly 5,000 were illegal because top union officials had not signed non-Communist affidavits when elections were held (BW—Jul.21'51,p32). Reason: The Supreme Court had decided last May that Taft-Hartley's requirement of affidavits was binding on top union officials as well as on officials of component unions.

• **Repercussions**—This week the board dismissed 21 unfair-labor-practice orders. The orders were all based on complaints that were issued against CIO employers before Dec. 22, 1949—when CIO officials finally signed non-Communist affidavits. About half of them were still in the courts, where NLRB was seeking enforcement rulings. None of them had actually gone into effect.

Among the orders dismissed were important ones involving Metropolitan Life Insurance Co. and United Office & Professional Workers (ex-CIO); Tide Water Associated Oil Co. and Oil Workers International Union (CIO); Salant & Salant and the Amalgamated Clothing Workers (CIO); Higgins, Inc., and the International Union of Marine & Shipbuilding Workers (CIO); Montgomery Ward & Co. and the Retail, Wholesale & Department Store Union (CIO).

• **No Answer**—That leaves unanswered, though, the question of what's to be done with the many NLRB orders that employers have complied with. Can employers now go back on these orders and redischarge employees, for instance? And where do employers stand who were ordered to bargain with a CIO union that was certified before Dec. 22, 1949? Can they now cancel a contract that resulted from NLRB-forced bargaining?

NLRB says frankly that it does not know. Its first reaction is that once an employer complies with a board order he's stuck with it. But the board says that it would have to rule on the question case by case to rule fairly.

• **Right the First Time**—Gerard D. Reilly, former member of the NLRB who helped draft the Taft-Hartley law and who now is an employer counsel, thinks the board's first guess is the right one.

As Reilly sees it, an employer can't challenge the legality of a whole contract just because it was signed after an invalid NLRB election. If the employer signed a contract after the election, he's stuck with it, just as if he had recognized the union voluntarily.

Even if the employer refused to bargain with the union after the NLRB election, but agreed to comply with an NLRB order directing him to do so, Reilly believes he's stuck firmly with it now.

Where a board order to bargain has a continuing effect, however, Reilly feels that an employer should be able to have the order set aside in the future.

Generally, attorneys are of the opinion that if an employer tried now to dismiss an employee who was previously reinstated by NLRB order he would just raise a new case of unfair discharge that could be prosecuted. Some attorneys think an employer might have a legal right to sue for recovery of back wages paid under order of NLRB. But they caution that such a suit probably would cost more than it retrieved.

• **Pools Are Routine**—The most immediate problem—of holding new union shop elections to replace those held before Dec. 22, 1949—actually concerns labor and management the least. Most of the pools will be just routine. Until they are held, most employers simply will not enforce the clause in their contracts that requires the affidavit.

• **Bargaining Bombshell**—Labor attorneys anticipate plenty of other difficult situations that will arise as a result of NLRB's ruling. Though they can't say yet what the difficulties will be specifically, they do describe the ruling as a "bombshell" that will upset all normal bargaining relationships.

• **Reconsider**—The NLRB decision that caused all the fuss removed the contract of United Auto Workers (CIO) at Ford Motor Co.'s forge plant at Canton, Ohio. That is only one step toward the objective of the AFL blacksmiths, who initiated the case. NLRB must now decide whether to grant the blacksmiths' petition for an election that, if this union won, would break up UAW's companywide bargaining and set up a separate forge unit.

Both UAW and Ford attorneys opposed this request at a hearing before NLRB. They were joined by the CIO in asking NLRB to reconsider and reverse its decision holding invalid the 5,000 union shop contracts.

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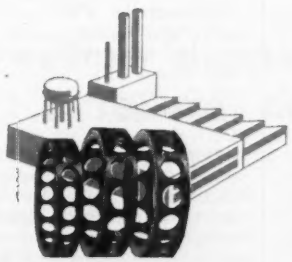

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Trouble at Top

Two unions have it. Air pilots drop Behncke—on full pay, with praise. In textile group, it's a bitter fight to rule.

Two important unions are having leadership troubles so serious as to raise a question mark over their future.

The one in which a leadership fight is already at a very critical stage is AFL's Air Line Pilots Assn.—a pure craft union whose members' pay scales are only topped on the average by the Screen Actors Guild.

The other, in which a battle over top office is one step away from an explosion, is CIO's sprawling Textile Workers Union of America—an industrial agglomeration that takes in some of the lowest-paid U. S. union members.

• **Personal Matter**—David L. Behncke, founder and long-time president of the Air Line Pilots Assn. (AFL), has been voted out of office by ALPA's 200-man board of directors. No dispute over major union policies lay behind the ouster. The board acted only, it said, because Behncke at 54 had "worked his heart out" for the union. Not unkindly, Behncke was told by some of his old associates that he had become "a mentally sick man."

If the ouster sticks—Behncke may fight it—there will be little change in union policies. It will bargain as hard for the same things as during Behncke's long tenure in the presidency.

• **Different in TWUA**—Usually, an ouster fight against a union president is a messy affair and—no matter how it ends—leaves the union weakened. What's happening right now in the Textile Workers Union of America (CIO) shows that.

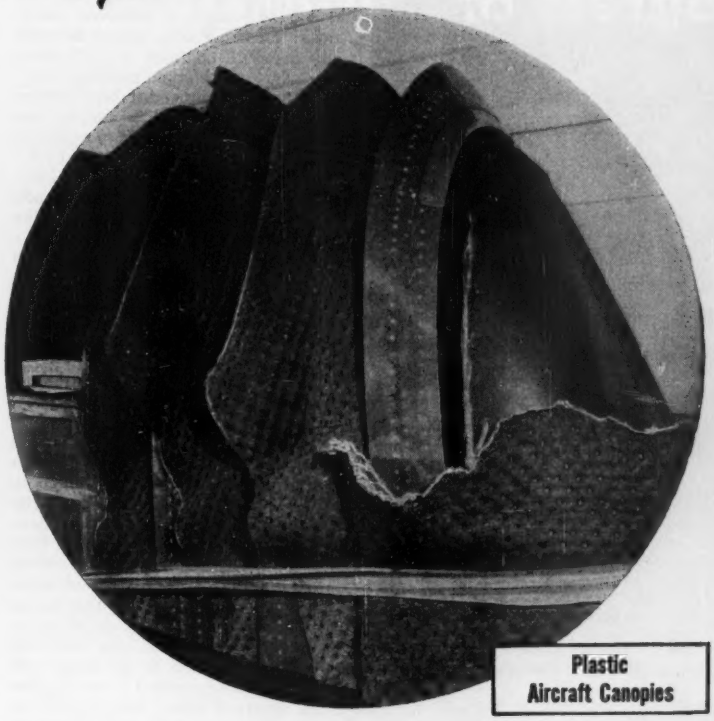
Until a year or so ago, TWUA was considered an up-and-coming union in CIO. It had made slow but steady progress in unionizing hard-to-organize textile workers. And it had not one but two top-flight leaders: Emil Rieve, president, and George Baldanzi, executive vice-president.

Then a feud developed between the two and split the union (BW—May 13'50,p116). While TWUA offers other explanations, it's a fact that its membership and organizing efforts have been slipping ever since.

Last weekend Baldanzi forces held a caucus in New York, pledged $100,000 for a fight to "democratize" TWUA by ousting Rieve at the union's next convention, early in 1952.

If anyone had any hope of a rapprochement, that ended it. It's now certain that next spring either Rieve or Baldanzi will go. The break will be a

Kimpak® *Float Packaging*



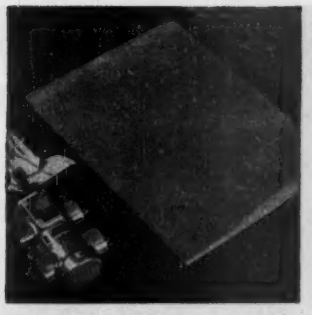
Plastic Aircraft Canopies

Cuts military shipping costs— reduces damage in transit!

From wartime packaging of a great range of military items—to peacetime protection of furniture, food, machinery and china! There's almost *no limit* to the type of products protected in shipment by KIMPAK* Float Packaging. But more important than its versatility is the fact that KIMPAK also provides optimum shipping protection at *lowest* true cost.

Delicate aircraft canopies for instance, are guarded against scratching and bruising; against shock, vibration and changes in humidity. Other finely machined parts are literally "floated" to their destination, free of the countless hazards of rail, truck, air or water transit—as well as storage. And soft, clean, grit-free KIMPAK is as easy to apply as wrapping paper. Its many grades and thicknesses, too—in rolls, sheets or pads—let you "tailor" the packaging operation to your particular requirements.

So regardless of your packaging problem—and especially if you are engaged in the shipment of defense materials—it will pay to investigate the better protection and economy of KIMPAK Float Packaging. For complete information, including prices, see your nearest KIMPAK distributor listed in classified telephone directories under "Packing Materials" or "Packing Materials—Shipping"; or write to Kimberly-Clark Corporation, Neenah, Wisconsin.



Hydraulic Relief Valve—protected by Grade A paper, ½ inch KIMPAK Creped Wadding, and foil-lined Kraft pouch.

Pressure Control Valve—protected by Saran moisture vapor pouch, KIMPAK, Grade A paper and Metal Edge box.

Selector Valve—protected by Saran moisture vapor pouch, KIMPAK, Grade A paper and Metal Edge box.

All photos courtesy of North American Aviation, Inc.

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bitter one, and TWUA very likely will suffer for a long time.

• **But Not ALPA**—It's different with the Air Line Pilots Assn. While the action to oust Behncke may also be called a move to "democratize" the union, it wasn't a factional move. Board members who ousted Behncke also voted to continue his $15,000-a-year salary as a lifetime pension.

They also commended his "wonderful work" for the union and air line pilots generally. But, they explained, he'd begun to feel that "I am ALPA."

Behncke founded ALPA in 1930, just about wrote its constitution and bylaws singlehandedly, and nursed the union through years of uncertainty. Today, ALPA is a strongly knit union with 5,000 members and $750,000 in assets. It is a factor to be reckoned with seriously in contract bargaining—as United Air Lines can testify (BW—Jul.7'51,p30).

Despite its growth in size and importance, it stayed a one-man operation.

• **Too Much Work**—Nowadays, a union president can't keep all of a union's business under his hat. There's far too much to be done. So, for months, ALPA's board—which is actually a convention of elected delegates—has been after Behncke to resign from his one-man operation of ALPA. Members pleaded that the strain of union affairs has told on him and that for his own good, as well as that of the union, he should decentralize top authority.

Behncke refused to go along with such a proposal—even if it would allow him to stay in office, keep his full salary, and retain a large part of his past responsibilities. He called the proposal illegal, fired his executive vice-president and other union officers.

With 180 directors of 200 represented, the board then voted to retire Behncke at full pay, acting almost unanimously. They elected the deposed executive vice-president, Clarence N. Sayen, as Behncke's successor.

• **Court Fight?**—Behncke at first challenged the ouster, then withdrew a legal fight to upset it when advised that a court suit might force a receivership for ALPA. The withdrawal looked as though it might have been only temporary when, this week, Behncke shifted attorneys and began talking of legal action all over again.

• **No Softer Touch**—Behncke is known in the industry as a tough bargainer. But his successor apparently won't be any easier for air lines to deal with. For instance, Sayen already has announced that (1) ALPA's present truce with United will stand—and union pilots won't fly fast DC-6B planes unless work hours are reduced from 85 to 70 a month; and (2) the union isn't going to "soften" demands anywhere in order to get quick settlements.

What! Air condition a furnace full of white-hot metal?

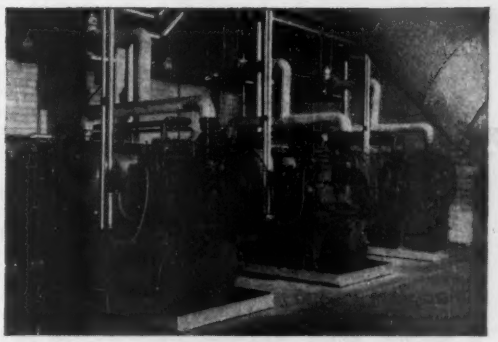
Sounds fantastic—yet it's actually only one of the *many* ways in which Frigidaire Air Conditioning is serving American industry today.

The pictures on this page show just three of the scores and scores of Frigidaire installations in factories all across the nation. These installations differ greatly in size and purpose. But all have one thing in common—

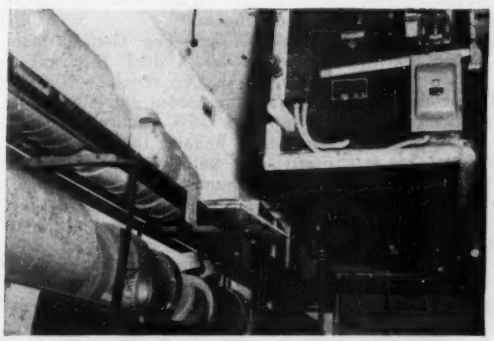
In every case, Frigidaire Air Conditioning is helping industry do a better production job.

How? By speeding up production — by cutting down on costly waste of materials and manpower—by assuring uniformly high product quality.

To American industry, this ever-increasing industrial use of Frigidaire Air Conditioning means better products at lower cost. To the entire nation, it means more efficient production of the goods we need for homes, farms, businesses — and for defense.



LESS WASTE. This Frigidaire installation has cut cast-iron scrap losses in half for an Indiana foundry. The equipment (above) cools, dehumidifies air fed into the cupola. Frigidaire Air Conditioning also reduces waste by protecting valuable inventories from the inroads of heat and humidity.



FASTER PRODUCTION. Damp air causes insulating paper used in electric motors to swell—result: production slowdowns, stoppage! But Frigidaire Air Conditioning in *this* storeroom keeps paper at just-right humidity—neither too damp nor so dry that it can crack, and cause short circuits.

HIGHER QUALITY. The gauges these girls are using can measure to 1/200,000 in., but they'd be useless if the temperature of tested parts wasn't kept uniform by Frigidaire Air Conditioning. Frigidaire equipment is used in many precision operations where exact control of heat, humidity and dust is vital.

Frigidaire Air Conditioning and Refrigeration

Over 400 Refrigeration and Air Conditioning Products for Offices Laboratories • Processing • Precision Assembly • Storage Plant Lunchrooms • Medical Departments • Water and Liquid Cooling

O. K. on Fringes...

...if they match standard industry and area practices, that is. Otherwise, the allowable 10% ceiling still holds.

Employers may now grant "fringe" raises, such as longer paid vacations, to catch up with industry or area patterns—even if the increase pierces the government's 10% limit on raises.

The new fringe order came through officially this week, by a 9-to-3 vote in the Wage Stabilization Board. It had been delayed a week (BW–Jul.21'51, p38) awaiting Economic Stabilizer Eric Johnston's approval. Prior approval must be obtained for fringes that increase pay more than 10% above the level of Jan. 15, 1950. But that's a formality only. As long as the raises comply with common practices, approval will be automatic.

• **First Split Vote**—The 9-to-3 vote for the formula marked the first recorded split vote for an order in WSB. It was also a split within a split, for one industry representative, Alexander Heron, voted with public and labor for the fringe formula. The other industry people—G. Maynard Smith, Milton M. Olander, and George Armstrong, Jr.—opposed it.

When first proposed, the formula had the unanimous backing of the tripartite WSB. Industry opposition rose when Johnston insisted that employers promise not to use increased costs resulting from approved fringe benefits to justify price relief.

• **The New Formula**—The new formula covers employer-union petitions for additional paid holidays, longer paid vacations, increases in premium pay related to days and hours of work, and bigger call-in allowances. Increases in these specific types of fringes will be allowed only up to the amount, or time, generally accepted for the industry or area.

Employers already up to the standard practices won't be allowed to give increases without offsetting them against the allowable 10% raise.

The new policy covers only the four specific benefits. Eventually, however, WSB expects to broaden the list considerably. For instance, it already is considering new regulations on health, welfare, and pension plans. Other items will be added to the list later.

• **Common Practices**—Since the war, paid vacations of one week after one year and two weeks after five years have become the practice in most industries. Major contracts also provide for six paid holidays a year and overtime after eight hours' work a day.

WSB has generally accepted these as "standard" in allowing laggards to catch up and probably will continue doing so.

Some employers are giving three weeks paid vacations to workers with 10 or 15 years of service. Some are giving as many as eight paid holidays a year. These are new developments which haven't become the accepted practice in an industry or area. WSB isn't likely to O.K.—for the present, at least—any liberalization of existing benefits to match these practices—unless the benefit is offset against the allowable 10% raise.

Strike Crackdown

White House to invoke Wage Board action unless copper and aluminum walkouts are settled in a hurry.

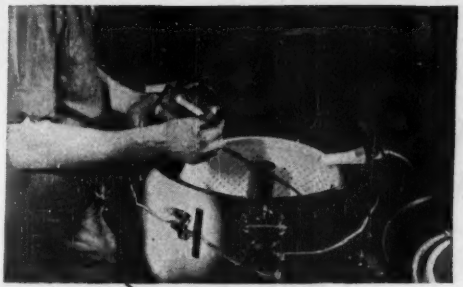
The White House prepared at midweek for strong action to end two walkouts threatening the nation's mobilization drive: a three-week-old strike at American Smelting & Refining's important Garfield (Utah) copper smelter, and the six-week strike at Detroit and Cleveland aluminum plants.

Government spokesmen called both copper and aluminum tieups "most critical" in their effect on defense production. They said they "cannot be tolerated" at a time when production is at a premium.

• **Utah Dispute**—The Garfield stoppage, by the United Steelworkers (CIO), has shut off about 25% of the nation's badly needed domestic supply of copper. USW wants American Smelting & Refining to adopt steel-industry wage scales. It would cost the company a minimum of 20¢ an hour, raise some rates as much as 45¢.

• **Retroactive**—The Aluminum Co. of America strike by the United Auto Workers (CIO) has pinched off 75% of all aluminum forgings and castings used in the aircraft industry. Some plane plants have had to shut down (BW–Jul.21'51,p25). There is now only one major issue: whether a 3¢-an-hour raise agreed on by ALCOA and union should be made retroactive to Dec. 18, 1950.

Final efforts to mediate the two disputes delayed White House intervention this midweek. There was no secret about what the White House planned to do if companies and unions failed to reach a quick settlement: The unresolved disputes would be the first referred to the Wage Stabilization Board, and strikers would be requested to return to work while WSB studied issues in the disputes.



Adhesives eliminate screws, nails and rivets in many operations. Here a 3M adhesive is being applied to the rim of a washing machine prior to laying a rubber trim gasket to seal the cover when the machine is in operation.

Coatings are remarkable cost-cutters for metal working industries. Coatings protect metal from scratches and abrasions during fabricating, storing and shipping, eliminating extra repolishing. And they strip off *easily!*

ADHESIVES COATINGS SEALERS

3M® COMPANY

Sealers in the aircraft industry meet tough operational requirements. This weatherproof sealer—being applied around the wing root fillet of a jet fighter—provides a resilient seal at sonic speeds, at temperatures down to —80°F.

YOUR 3M SALESMAN HAS 1000 ANSWERS TO YOUR STICKY PROBLEMS

Whether it's an adhesive, a coating or a sealer, its usual requirement is *to stick.* That's 3M's specialty . . . making things stick. We have over 1000 stock formulas and one of these—or variations of one—can possibly fit your specific need.

Beyond actual products, 3M offers *service.* Our research and development facilities are set up to help you find the right answer to your problem. 3M field engineers come into your plant and fit the *right* formula into your production . . . and stay until it is working!

These elements of experience, service, and thorough knowledge of adhesives, coatings and sealers, make it profitable for you to look to 3M for the solution of your adhesive problems. For prompt help on your adhesives problems, contact your 3M salesman or write directly to 3M, Dept. 17 in Detroit. Write also for our valuable, informative, adhesives booklet.

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THE INJURED WORKER cost industry $2.5-billion in 1950. Cost may rise with . . .

Injuries Going Up

New workers, longer hours reverse three-year downward trend. It was the same early in World War II.

Industrial accidents are soaring again after a three-year drop. And according to the Bureau of Labor Statistics, the sharp rise is not simply an interruption of the favorable postwar trend. It's the beginning of a new upward trend similar to the one from 1941 to 1943.

For management, that's a grim fact to face. Last year industrial accidents cost employers an estimated $2.5-billion—$1.2-billion in what the National Safety Council describes as "visible" costs, the rest in conservatively estimated "indirect" costs.

The way injury rates have been going up, the toll will be even higher this year—when manpower is at a premium.

• **Tide Turns**—Manufacturing accidents dropped steadily for three years beginning in 1947. Then in 1950, just before the start of the Korean War, the injury-frequency rate turned up sharply. At the end of the first quarter of this year, the average rate was 16% higher than it had been a year earlier. An estimated 110,000 workers had lost 2.2-million man-days of work due to disabling accidents in those three months.

According to BLS, work injuries began increasing about the time defense production was stepped up in 1950. After that, the month-by-month change

Man at Work

rolling up meat sales

Modern pre-packaging of meats boosts profits. Product quality is protected, store life increased, loss through waste reduced, labor more efficiently employed. And customers like the convenience that pre-packaging affords.

Perhaps your product, too, can take on new sales appeal through modern visual merchandising. Put a Shellmar Packaging Counselor to work for you. He can place a *gold mine of ideas* at your disposal . . . how to get the most out of your *present package* during the emergency period . . . how to improve your package for *future sales.*

Whether you are packaging rolled roasts for civilians or roller bearings for the military—you'll find your Shellmar Packaging Counselor *a good man to know.*

MILITARY PACKAGING—*During World War II, Shellmar was the leading producer of war packaging material. Once again a complete line of materials meeting Army and Navy specifications is available for priority orders.*

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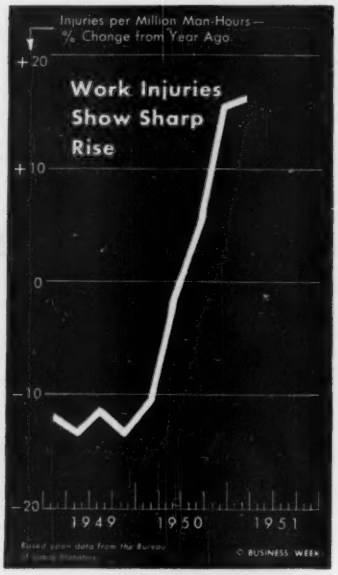
Shellmar

"Successful Package Creations"

8 The Hallmark of Successful Package Creations



in accident-frequency rates paralleled changes in total manhours worked. This showed, says BLS, that "rising employment and longer working hours had something to do with the upswing in injury rates."

• **Three Causes**—Specifically, the bureau blames:

• The entrance of new and inexperienced workers into industry. BLS found that the injury rate usually rose when factory accessions (hiring) went up, fell when accessions dropped off. New employees require time to become accustomed to their work before they are really safe workers.

• Some increases in scheduled hours of work—that is, more overtime work. Tired workers do not respond so quickly to sudden hazards and may let up on safety precautions.

• Transfers of employees to types of work unfamiliar to them. BLS found the transferred workers are "somewhat more likely to be injured."

• **Safety Drives**—The general uptrend in injury rates has set off new drives against plant accidents. Aware of the new interest in safety, the United States Bureau of Mines has released a five-year study of safety programs with the advice: If you want to make a safety campaign work, be sure top officials participate in it.

The bureau found that companies where "really interested" top officials —company and union—took an active part in a safety program had 5.3 lost-time accidents per million manhours; on similar operations where no top officials participated in a safety program, there were 128.7 lost-time accidents per million manhours.

The fourth in a new series of advertisements designed to tell the G-E Silicone Story to industry.

HOW YOU PROFIT FROM WHAT G-E SILICONES

Won't do

Oddly enough, one of the valuable characteristics of General Electric silicones is something silicones *won't* do. What is it they won't do? We're glad you asked that question. They won't react with most common materials.

Yes, G-E silicones are *inert*. For example, silicone rubber gaskets in mercury power systems won't react with mercury vapor. Silicones are not affected by sunlight; silicone oils will not deteriorate rubber.

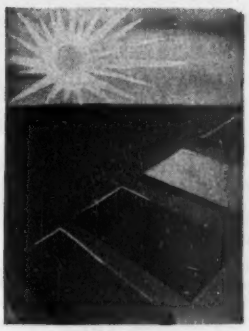
This characteristic of inertness can be valuable to *you* in applications where deterioration due to chemical reaction is a problem. Besides being inert, G-E silicones are extremely resistant to heat and cold; they provide excellent release from sticking, and they have a variety of useful surface properties.

HOW CAN YOU USE G-E SILICONES PROFITABLY?

More and more manufacturers are finding applications for silicones in their businesses. If you have a problem an inert material could solve—if heat or cold resistance, or release from sticking is a problem—it will pay you to investigate General Electric silicones. Write us on your letterhead for a free copy of the interesting new brochure, "The Silicone Story." Address: Section N1, Chemical Department, General Electric Company, Pittsfield, Massachusetts. (In Canada: Canadian General Electric Company, Ltd., Toronto.)

Even Mild Acids Won't Affect Silicones

Dilute acids and alkalies will not combine or react with silicone materials, even when the two are mixed together. Silicones are *inert*.



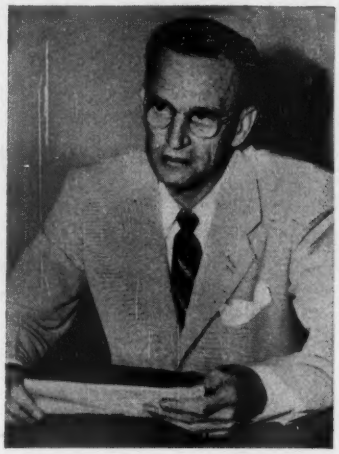
Silicone Paints Resist Deterioration, Staining

Paints formulated with G-E silicone resins are amazingly resistant to the deteriorating forces of the elements. A silicone-painted panel exposed to Florida sunlight for 3 years showed virtually no chalking or fading!

Iodine poured on a silicone-painted surface will wipe off without staining, due to the non-reactive quality of G-E silicone materials.

GENERAL ELECTRIC

LABOR BRIEFS



Unions' spokesman in OPS, John K. Meskimen, is a member of the Brotherhood of Railway Clerks (AFL). Meskimen spent five years in Germany on a government manpower assignment, has been a consultant on manpower in the Dept. of Labor since early this year. His appointment filled the last union assignment in defense agencies (BW—Jun.23'51,p34).

•

Wooing the boys, UAW local at Allis-Chalmers' Milwaukee plant held a father-son party, with music, fun, food, and free T-shirts blazoned with UAW emblem. Short talks plugged the theme: "Unions are good for people."

•

95F temperatures provoked 200 Southern Bell switchboard operators to walk off their jobs last week in Columbia, S. C. They struck, without a go-ahead from their CIO union, to enforce a demand for air conditioning.

•

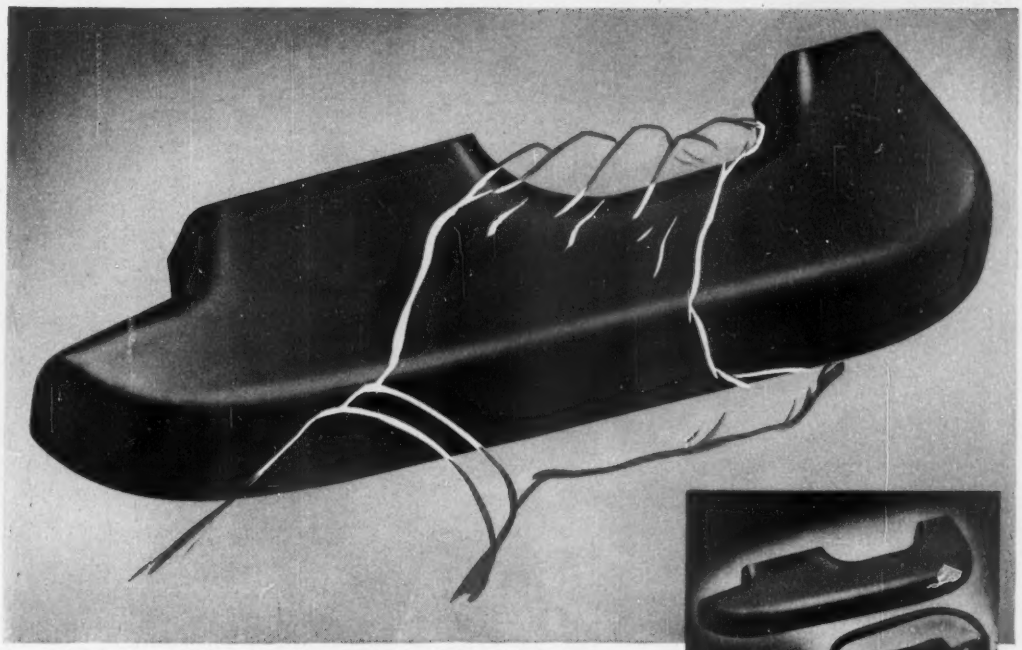
Weekly factory pay rose 13% in 1950, says BLS. Average weekly factory hours gained 3%; average hourly earnings 10%. But, BLS said, the rising cost of living ate up 8% of the gain, higher taxes cut into what was left.

•

Moonshine competes with union-made whiskey; so five AFL, CIO, and independent unions formed a committee to fight it. They want Congress to vote more money for the Treasury's anti-moonshining staff.

•

Get-tough policy against communism—and Russia—is urged by AFL in its official Labor's Monthly Survey. Criticizing this country's "piecemeal and halting strategy," AFL calls for firm "assurance to Stalin that the U. S. A. will halt any [further] aggression."



Arm rest shells by Hungerford Plastics Corp., Murray Hill, N. J., and Industrial Plastics Co., Division of Industrial Abrasives, Inc., 1829 So. 55th St., Chicago 50, Ill.

HOW TO GET A BETTER GRIP ON COSTS!

Combination grips and arm rests for Studebaker car doors achieve a goal everybody is seeking—maximum owner comfort and easier fabrication at lower cost. Thanks to resilient, *one-piece* shells of VINYLITE Elastomeric Plastics. They are extremely easy to fabricate, they prove again how easy it is to cut production time and expense—and get a better product.

They explain, too, why so many producers of essential defense and civilian products are turning to VINYLITE Elastomeric Molding and Extrusion materials for grommets, tubing, hoses, sockets, pedals, bumpers, shelf supports, intricately shaped parts of a thousand descriptions.

These economically formed materials, available in all colors, resist stains, dirt, mildew, water, oils, greases, alkalies, and most strong acids. They lower production costs, simplify assembly, and last a lifetime.

You'll learn lots more about them from the booklet "VINYLITE Resins and Plastics—Extrusion and Molding Materials." Write Dept. KR-62 for your free copy.

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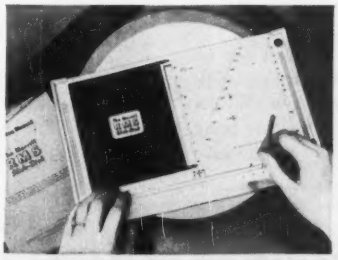
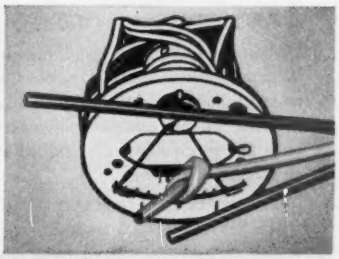
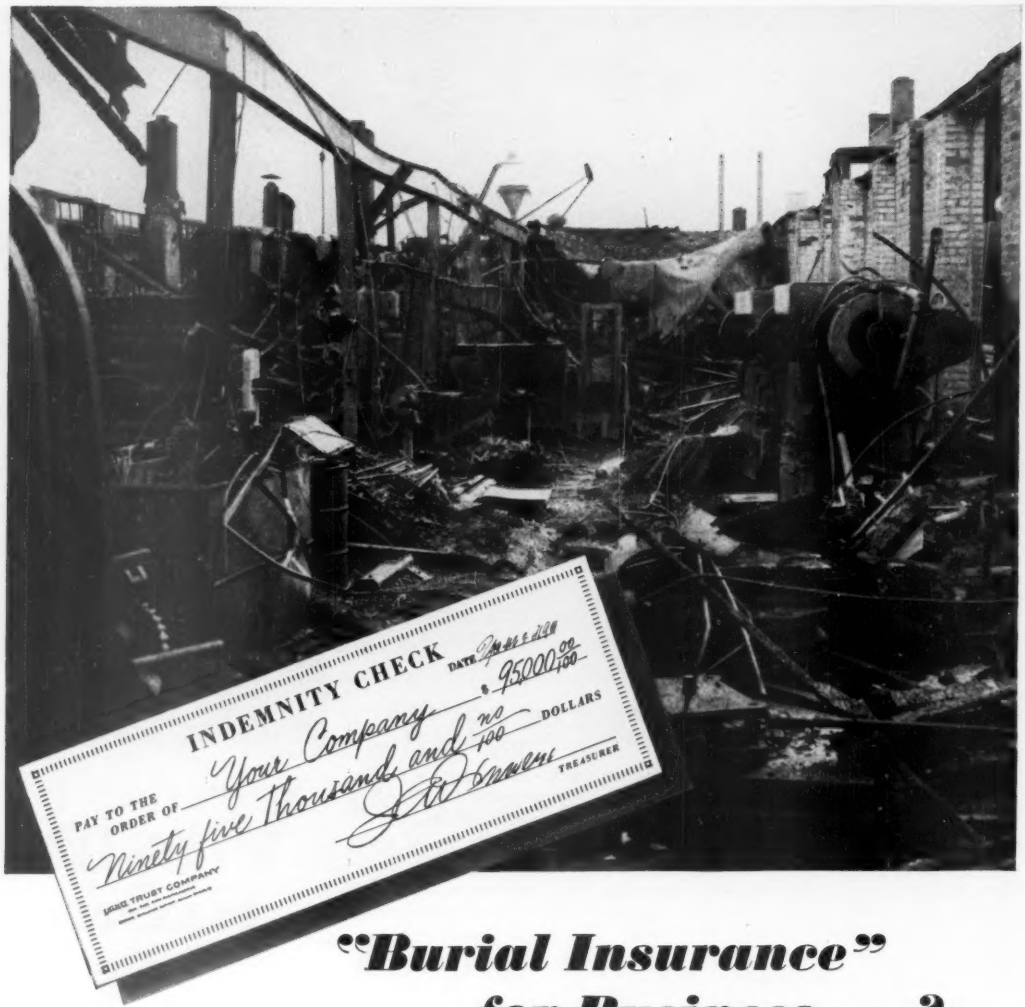
PEAK DEPENDABILITY. Vital military and civilian radios, machine tools, planes, control circuits stay on the job longer with wires and cables insulated or jacketed with VINYLITE Plastics and Resins. Strongly resist heat, cold, grease, water, mildew, aging, corrosive atmospheres.



DIMENSIONALLY STABLE. Quickly solving statistical problems, this "Merrill RMS Slide-Disk" calculator has critical parts of VINYLITE Rigid Sheets that hold size, shape, resist wear, chemicals. Pleasant feel. Easy to clean. By Graphic Calculator Co., 633 Plymouth Ct., Chicago 5, Ill.



HIGH DIELECTRIC STRENGTH is held by this electrical insulating tubing even if twisted, knotted, exposed to heat. Made of VINYLITE Plastisols and glass fibers at low cost. Cuts clean. Non-flammable. Many colors. Resists oil, water, most chemicals. Bentley, Harris Mfg. Co., Conshohocken, Pa.



"Burial Insurance" for Business . . . ?

If your business were burned-out tomorrow, the records indicate the chances are 2-out-of-5 that it would be dead as a doornail . . . *and stay that way.*

For, while it may help cushion your financial loss, no indemnity check can take the place of scarce materials and equipment. No indemnity check can replace invaluable, burned-out records. No indemnity check can bring back lost customers . . . or skilled workmen who have strayed to other jobs.

Therefore the only true protection for your business is to control fires that do start, preventing them from spreading and doing irreparable damage. Fires *can* be controlled by checking them at the source, when they start, with Grinnell Automatic Sprinkler Systems.

A record of over seventy years shows that practically every fire starting in buildings protected by Grinnell Sprinklers was extinguished before doing material damage. If you have fire insurance, you're probably paying for Grinnell Protection anyway . . . *so why not have it!*

GRINNELL
FIRE PROTECTION SYSTEMS

GRINNELL COMPANY, INC., PROVIDENCE 1, RHODE ISLAND • BRANCH OFFICES IN PRINCIPAL CITIES

MARKETING

SMASH HITS, like this, with book club and reprint boosters, provide one of the few bright spots for harried publishers.

Book Trade Hits New Trouble—With FTC

When the Federal Trade Commission swung out against six big publishing houses the other day, it hit a business that was already creaking at several joints.

Some of the cheerfully harried people who struggle with the eccentricities and intricacies of the book trade feel that the time of troubles is only temporary. And it's true that a single lucky strike, such as Doubleday's Black Rose (picture), does wonders with the profit picture for publisher and author.

But it seems clear that it all isn't that easy. A growing segment of the business feels that if books are to hold their place the industry will have to change its thinking drastically.

• **"Unlawful"**—The burden of FTC's complaint is that the publishers named engage in "unlawful practices which give book clubs an unfair competitive advantage over retail book stores." FTC emphasizes that it is just trying to get at the facts of the case. If the hearings in the fall convince it that the charges are justified, the industry will have to revise its practices whether it wants to or not.

The six companies named in the complaints are Doubleday & Co.; Harper & Bros.; Houghton Mifflin Co.; Little, Brown & Co.; Random House; Simon & Schuster. But the whole book world has a stake in the outcome.

The main complaints allege:

• The publishers, in return for specified royalties, lease printing plates to the book clubs, but refuse to lease them to retail book sellers.

• They fix minimum prices at which retail stores must sell the publishers' editions, but let the book clubs sell their editions at any price they like. And the retailer is not allowed to give out book "dividends" as the book clubs do.

• The publishers discriminate by giving different discounts for like orders to different wholesalers and jobbers. FTC says this is a violation of the Robinson-Patman Act.

• **In the Clear**—For their part, the publishers who would comment maintained that they have violated no law and that they can justify their practices.

The first charge grew out of an effort two years ago of the American Booksellers Assn. to lease plates from publishers in order to go into the reprint business itself. On this point, a spokesman for one big house says that ABA never came to the point of a firm offer.

On the discrimination charge, the publishers feel their position is straightforward; they offer better discounts in direct return for better service.

The retailer and the book publisher naturally view the book clubs with different eyes. To the retailer, the club is a monster that grabs his sales by undercutting his prices. The Book of the Month Club sold its editions to its subscribers at prices 27% below the retail price in 1950; in some cases the difference has been much greater.

To the publisher the clubs are anything but monstrous. His profit margin is so slim—generally about 5% of gross sales and rights after taxes—that the clubs' payments for rights and the publisher's share of the royalties often spell the difference between red ink and black.

• **"Trade" Books**—Even before FTC moved, there were troubles on Publishers' Row. "Trade" books—fiction, travel, biography, etc.—are dragging. Fiction is close to a dead faint; it's being carried along by the sturdier technical and religious books. Juveniles, on the other hand, are booming.

The most obvious and painful symptom of the industry's malady is fading profits. Ever since the peak years of 1946 and 1947, profits have been coasting (BW—Sep.11'48,p96).

• **Stores Hurt**—The publishers with their 5% profit are not too well off. But the book stores have it a great deal worse. George Hecht, vice-president of Doubleday Co. and general manager of Doubleday Book Shops, reports that a few years ago his stores could scrape up a 3% net. Today it's down to 1% after taxes. And Doubleday is one of the prosperous ones.

Sales aren't too bad. Long term, they are distinctly encouraging. The firmest figures in a trade that keeps its records to itself are those of the Census of Business. These show that in 1948 retail book store sales (not counting department stores) came to $267.7-million. That's a 263% rise over 1939.

Publishers Weekly reported in January of this year that 1950 sales apparently had held about even with 1949. First-quarter dollar volume of 1951 appeared to be slightly ahead of the corresponding 1950 period. Hecht says that Doubleday stores were 5% ahead of 1950 for the first four months of this year and that for the fifth and

sixth month they were nearly 15% ahead.

• **Profits Lag** – Generally speaking, though, the profits report hasn't kept up with the sales. The industry admits this, though there are few figures to prove it. Of the handful of concerns that publish income figures, the ones that show a steady improvement are mainly those that depend only in small part on trade books for revenue.

	1950	*1949*	*1947*
	(In Thousands of Dollars)		
Bobbs, Merrill			
Net sales..	$2,925	$2,784	(not available)
Net income	$182	$148	$201
Book of the Month Club			
Net sales..	$14,045	$13,125	$18,541
Net income	$1,226	$1,113	$1,666
Henry Holt			
Net sales..	$3,059	$3,150	$3,478
Net income	$182	$280	$2
***Macmillan**			
Net sales..	$13,208	$13,346	$12,173
Net income	$628	$825	$715

* *Year ended Apr. 30.*

I. The Squeeze of Costs

The obvious explanation for dwindling profits is the cost squeeze.

Publishers' costs in 1951 are around 85% higher than in 1941. Printing and binding costs have risen on an average 3% a year for the last five years. Paper prices over the same period have gone up roughly a penny a pound. Cloth rose 20% to 25% from October, 1949, to December, 1950.

Meanwhile, prices have risen much less. Fiction prices have climbed around 25% between 1941 and 1951. In textbooks, the spread has been narrower. Textbook costs rose 82% from 1939 to 1949; prices rose 61%.

• **Sidelines**—The retailer is squeezed, too—between rising costs and a discount that has held pretty steady at 40%. And just as many publishers find their profits in book club royalties, so more and more retailers find their only salvation in sidelines—greeting cards, records, toys. Sales of records accounted for about a fourth of Doubleday's book store total in 1950.

II. What's Wrong?

The moral depression in the trade is greater than the figures would seem to justify. Partly that's because the industry can't forget that it's no longer riding a boom. If it could forget, its accountant and severest critic, J. K. Lasser, would remind it. For months he has been wielding a stern paternal rod over his charges to spur them on.

Lasser's goads are figures like these. Government statistics on personal consumption expenditures show that total consumer expenditures rose 22% from 1946 to 1949. But money spent on

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IT PAYS TO KEEP PACE WITH MACHINERY PROGRESS

SOMETIMES there's almost a sentimental attachment to machinery. But it's probably costly sentiment! The old machine may appear to be in good shape, but upon analysis, you'll usually find it can't keep up with newer machines in speed or quality.

It's unit cost that counts! No one can afford the luxury of obsolete machines in the face of higher costs and manpower shortages. A careful analysis of your equipment may be in order.

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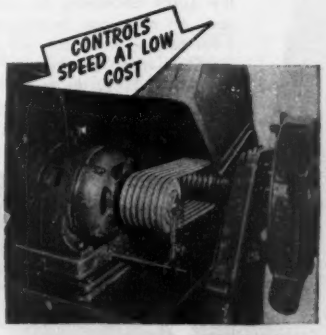

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ALLIS-CHALMERS

books in 1949 was only 83% of the amount so spent in 1946. In a day of rising incomes and heavy employment, Lasser says, the book business has no business to be slipping.

• **Price Policy**—There is a growing feeling that, for the industry as a whole, the situation is serious, and not temporary. And there is some tendency to agree with Lasser that some of the responsibility lies directly at the industry's door. An executive of a major publishing house sums it up briefly: The industry has been asleep at the switch on two counts: (1) failure to realize that some of the profits squeeze comes from a costly and antiquated operating system; and (2) failure to take the obvious step to relieve the squeeze by raising prices.

• **Obligation**—The debate on prices is seething. Those who want to hold the price line have a double motive. They have a genuine feeling that the book business is different from other businesses; it has an obligation to keep prices low. They're also afraid higher prices may put them out of business.

This reasoning applies primarily to trade books. Textbooks and technical books are necessities. People will pay high for them if they have to.

But there is a growing belief that they will pay higher for novels, too, if they have to. After all, Gone With the Wind sold hugely for a then whopping $3.00 in 1936. If people won't pay more, this school holds, let's find it out. The way things are going, the trade publisher may have to get out anyway; he might as well get out trying.

• **Clumsy Setup**—Besides these difficulties, the book world is saddled with a cumbersome and expensive distribution setup. The small retailer faces a mountainous task of keeping in stock a representative inventory from a vast number of suppliers. He gripes at the ineptitudes of a system that makes him pay shipping charges for a single copy at a time. The wholesaler and jobber have their own worries; often they are competing with the publishers they serve.

Harry Scherman, chairman of the Book of the Month Club, says distribution is the core of the problem. That's where the book clubs come in. He credits their relatively prosperous condition (Book of the Month's net profit rate after taxes was 8.7% last year) to the fact that the clubs have succeeded in distributing to a market that the nation's some 3,000 book stores don't catch. The reprint houses and the clubs have done it by poaching on other distribution preserves.

• **Drugstores**—Thus Grosset & Dunlap 50 years ago took to peddling its reprints through the drugstores. The book clubs found their distribution points in the nation's 40,000-plus post offices. Up

to now, the 50-odd book clubs have harnessed Uncle Sam into passing out some 250-million books.

The baby of the field, pocket-sized paperbound books, went them one better. The chief outlets are some 100,000 newsstands.

It seems to be a question whether paper books aren't running away with the field. Bantam Books, second-largest in over-all output (Pocket Books ranks first), estimates that the total of paperbound books distributed last year came to 214-million copies of 940 titles. That was 30-million more than were distributed in 1949. Dollar volume, Bantam says, about tripled between 1945 and 1950. And profits are doing nicely, it reports.

• **Bane or Boon?**—The industry as a whole views these strapping youngsters as mixed blessings. Paper books have practically killed the hard-back reprint, says Random House's Bennett Cerf. They have cut deep into fiction magazines, especially the pulps. They threaten to knock out the rental library.

Both book clubs and paper book editors insist they have built up, not knocked down, the market. Their products reach people who would never buy a book at a book store. Scherman says book club books bolster sales of publishers' editions. And without profits on mass reprint rights, how could publishers get money to print the important author who doesn't sell?

• **Television**—Other imponderables are in the picture: Too few readers (estimates are that from 15% to 30% of the U. S. population can be classed as readers), too many second-rate novels, too many other claims on the might-be reader's time. At least one executive ranks television as the prime offender. Others feel that TV hurts in the short run, but helps in the long run.

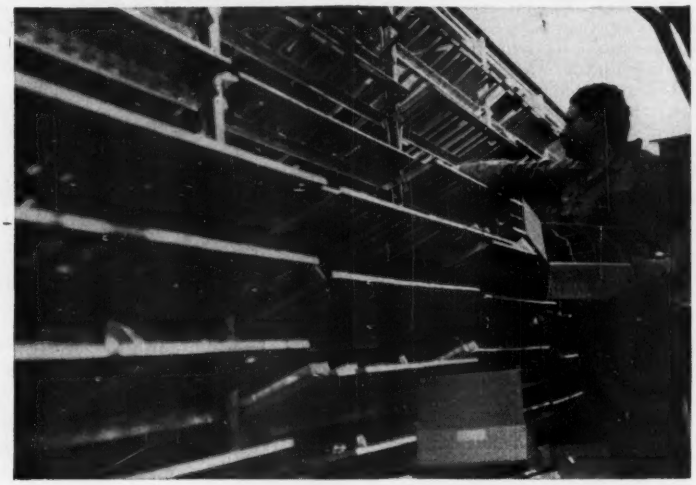
• **Marketing Trouble**—Considering the tremendous market potential in a country as big and as literate as the U. S., this looks like a marketing problem.

Lasser feels that the answer is better merchandising. That means a more realistic picture of what the market is. The trade is working on this problem. Two committees of the American Book Publishers Council have recently been set up to probe the whole question of reading—and nonreading—habits.

• **What's Coming**—FTC's move brings all these issues into sharper focus. The hearings may result in a trade conference and a trade code that will untangle some of the snarls over discounts, early reprinting, and the like.

If the decision should go against the publishers, what then? "I know," says Scherman, "but I won't tell you." One possibility is that the book clubs might turn publishers. This might prove the final shove that would send weaker members of the trade to the wall.

Drug-O-Mat Saves Time for Shopper...



. . . Saves Work for Storekeeper

Drug-O-Mat, new self-service method of selling drugs and little brother to the Food-O-Mat, is winning smiles from customers—and storekeepers. Macy's, for one, tried out the new method in its Parkchester store in New York last fall. Drug business jumped 20%. As a result, Macy's eagerly installed a second Drug-O-Mat in April —in their Jamaica (N. Y.) store (pictures above).

And with fair trade developments menacing drug prices, druggists may go for it in a big way as a cost-cutter and business-getter.

The Drug-O-Mat works just like the Food-O-Mat: A battery of inclined chutes is fed automatically by gravity. A shopper takes out a drug item and another slides into place.

And like the Food-O-Mat, it has advantages on both sides of the counter. For customers it cuts shopping time by about two-thirds; it gives the shopper an assortment unparalleled by the old shelf-stocking method. It allows the storekeeper to display up to 800 items at once, spurs impulse buying, permits easy stocking from behind the scenes.

Drug-O-Mat was inspired by Food-O-Mat, a wholly owned subsidiary that Grand Union Co. set up in 1947. Grand Union has installed 90 Food-O-Mats in its grocery stores, claims that sales have upped 47.5% on the average since then.

Outboard Sprint

Shorter hours and longer purses since the war have brought skyrocketing motor sales. Shortages may hurt now.

When personal income is high and working hours relatively short, sporting goods sales shoot right through the roof. Riding right at the head of the rocket, since World War II, is the outboard motor business.

Sales statistics are startling. In the five years since the war, 2,065,000 motors have been sold. That's nearly three times as many as in the nine years before the war, more than five times as many as in the 12 years before 1931. In 1947, the peak year, 625,000 motors were sold. That tops the total of the five best years before the war.

• **Still High**—That great surge of buying blotted up a lot of demand. Since then sales have gone down. But 1950's 340,000 sales still beat the two best prewar years together.

So far, 1951 production has stayed close to last year. But the manufacturers have their fingers crossed; shortages and allocations may put a heavy dent in their output.

For the industry, rearmament creates a paradox. The biggest factor in soaring outboard sales has been the skilled worker class—just the people who are full of work and money when defense contracts are flowing. Trouble is, defense also siphons off the materials.

• **Improvements**—Plenty of other factors have entered into the outboard boom, besides the prevalence of the five-day week and folding money. For one thing, the motors have improved sensationally, both in reliability and in versatility of performance. Today's motors, unlike the crankier of their ancestors, will start without a struggle. The larger ones have gear shifts, with neutral and reverse. Most of them can be throttled to slow speeds, as for trolling. That's extra important when you realize the Outboard Motor Manufacturers Assn. figures that two-thirds of all motors are used for fishing.

The motors have been shrinking in size and weight in relation to horsepower. The new Johnson and Evinrude 25-hp. motors weigh only 87 lb., fit nicely into the trunk of a car. Most motors are still smaller and lighter. With plastic and metal boats light enough to ride atop an ordinary car, the sportsman has a cinch in packing boat, motor, and fishing tackle for a quick jaunt.

The jaunting space is growing, too. Reclamation and flood control projects

have brought a lot of artificial lakes into being, to supplement such natural anglers' paradises as Wisconsin.

• **The Industry**—The bustling outboard demand is supplied by 12 manufacturers. Johnson is the largest, followed by the very similar Evinrude. It's an open secret that both companies are subsidiaries of Outboard Marine & Mfg. Co. In third place is the Mercury motor, made by the Kieckhaefer Corp. Mercury is one of several that started after World War II and has prospered mightily.

In the merchandising end, Sears, Roebuck & Co. is far ahead. Sears claims to do about 12% of total national sales with its Elgin motors.

Prices in all the lines range from $100 for the smallest motors up to a top of $599 for the 25-hp. Mercury. In general, the most popular motors are in the medium 5-hp. to 7½-hp. range.

Uncorking Scotch

Shortage is about to end as reasons for hoarding lessen. But older types will be hard to get for at least two years.

U.S. drinkers of Scotch whiskey can reach for the bottle again. The mysterious shortage that has corked the flow of their favorite beverage ever since Korea seems about to end.

Just about everybody in the liquor business agrees that the Scotch shortage was caused by hoarding—someone else's hoarding, that is. The accusing finger is pointed in all directions—at importers, wholesalers, retailers.

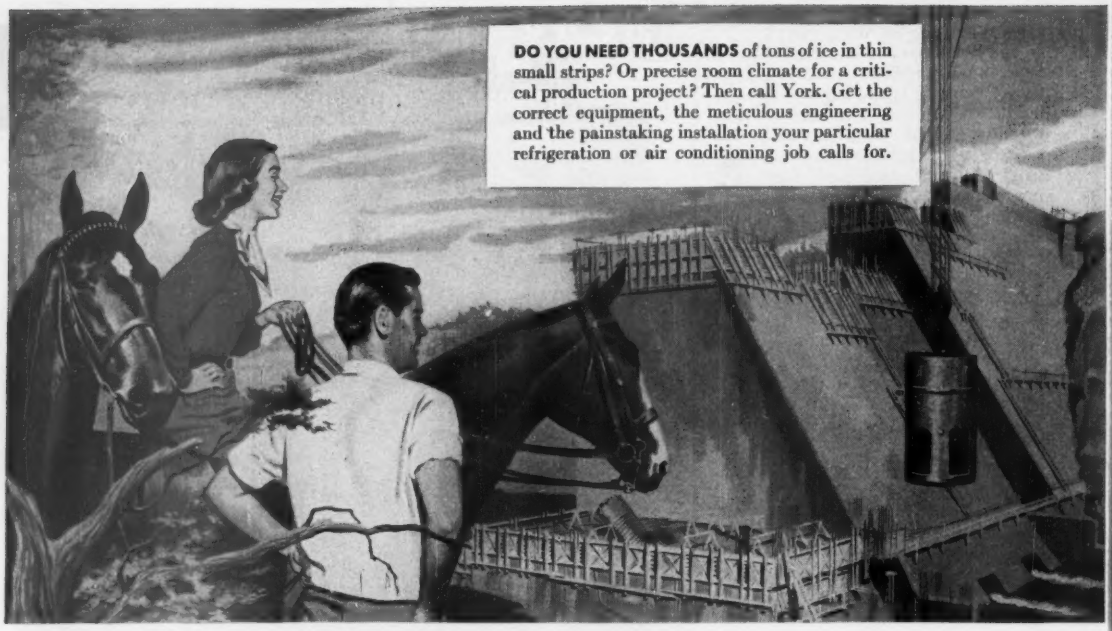
• **Sales Off**—One thing is sure: The missing Scotch didn't go to the individual drinker—or into his cellar either. In the 17 monopoly states, Scotch sales at the consumer level dropped 12.3% from May, 1950, to May, 1951. In the same market, sales of all liquor were off only 10.1%.

• **Picture Changes**—The liquor trade thinks that there won't be much hoarding from now on. Heavy stocks are likely to be an embarrassment rather than an asset:

• Fear of all-out war was the real spur to hoarding; and the Korean peace talks have made that contingency seem fairly remote.

• Any idea that war or other cause would check the flow from Scotland is currently in the discard. In 1950, 4-million cases poured through the U.S. customs; the distillers are pledged to ship another 4-million cases this year. The 1950 pace was 33% ahead of 1949.

• Tie-in sales—which forced a dealer to take unwanted rums, wines, or cordials to get Scotch—are dropping



Icy relief for a feverish dam

When you pour a vast pile of concrete, it can work up a fatal fever.

You see, the lime and other ingredients of concrete react on each other and generate a lot of heat. Add to this more heat from the pressure caused by the enormous weight of the mass and the temperature soon builds up to a critical point.

The concrete is apt to crack and develop structural weaknesses causing untold damage and expense.

Not so at the huge new Philpott Dam now building near Roanoke, Virginia. Here, smart construction engineers *pre-chill the concrete mix with FlakIce Frosty Ribbons.* These flakes of hard frozen ice quickly cool the concrete mix and hold down the feverish heat. Faster pouring of the concrete is made possible and the setting is greatly speeded up with less possibility of structural deterioration of the surface.

York FlakIce Ribbons the answer

York was the choice to provide mechanical refrigeration for this job. As a matter of fact, only York can furnish the machines to produce this ice. Today, York FlakIce Ribbons are famous in countless places—from small bakeries, markets, florists, restaurants, hospitals requiring a few hundred pounds of ice per day to gigantic construction projects, produce packing and chemical plants—using tons of ice each day.

And, along with its acknowledged leadership in mechanical cooling since 1885 goes York's *equally great reputation in air conditioning.* In applications ranging from public buildings, huge aircraft and electronic plants to the bedroom in your home, York air conditioning is the best solution to your problem.

Send for your near-by York Representative when your plans call for mechanical refrigeration or air conditioning. He is listed in your classified telephone directory and will see that you get complete York service.

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Certified Maintenance Service

York keeps a watchful eye over your installation under an exclusive Maintenance Contract.

Under its terms, York engineers check back regularly on your equipment, and report to you in writing.

You, in turn, save the time and trouble of making these checks yourself and you are assured of

Doctor's orders: "Quiet and comfort"

It's unpleasant enough to sweat out a hot muggy day when you are well and healthy. But when you're "laid up" indoors it can be harmfully exhausting.

Doctors say patients usually improve quicker when quiet and comfortable. That's why more and more hospitalized GI's are being provided with York Room Air Conditioners . . . which keep their quarters cool, fresh and comfortable.

York in homes, too

Every day more comfort-conscious people install quiet, economical York Room Air Conditioners in homes and offices . . . There are a good 15 reasons why!

With a York Room Air Conditioner installed you keep windows closed and enjoy freedom from outside noises. Big 7-ply filters clean the air constantly . . . keep it free from dust, lint and pollen.

The entire refrigerating system is completely hermetically sealed, trouble-free, backed by a 5-year protection plan. And your York Representative will show you eleven more features that make York America's most wanted room air conditioners . . . Best of all, these units are inexpensive.

York is the leader

York supremacy in air conditioning equipment is matched only by York leadership in refrigeration. Such modern marvels as the York Automatic Ice Maker that makes the famous *ice cube with the hole* and the unique York FlakIce units testify to York engineering skill.

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GI'S AND CIVILIANS alike get vast comfort from York Room Air Conditioners in hospitals and at home. These superb units are part of a complete line of air conditioning equipment for stores, hotels, restaurants and industrial use. They prove that the big advances come from York.

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out of the picture. The government has threatened to crack down on them. And most dealers are now refusing to go along on a tie-in. These sales complicated the shortage because they balled up the distribution of what Scotch was available.

The whole picture now adds up to ample supply. And if Congress decides to increase liquor taxes, that probably will put a heavy dent in over-all liquor sales. Some traders think this will hit Scotch especially hard, because it is in the upper price ranges. But the importers believe their well-heeled customers will fork up the extra 50¢ a bottle just to get their favorite brand.

• **Older Types**—That matter of the favorite brand may present some difficulties. The prewar labels that heralded 8- or 12-year-old Scotches will be rare birds, certainly for two years and maybe for five. The forced distilling holiday of World War II is putting its crimp now in the well-aged brands.

Few Scotches bear any age label these days. The reason: Dealers think their customers would rather see no age than have it called to their attention that the whiskey is only four to six years old, instead of in the older range that they learned to love before the war.

MARKETING BRIEFS

Some 10,000 retail stores did an annual business of more than $1-million in 1948, the last Census of Business shows; over 1-million did less than $100,000. In the $1-million-plus category, motor vehicles turned up most often—3,000 of them. Grocery stores with fresh meat and department stores ranked second and third.

•

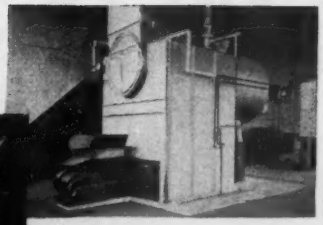
The University of Pennsylvania gave up its fight against limiting TV broadcasts of football games this fall (BW—Jun.16'51,p24). It will go along with the National Collegiate Athletic Assn.'s experiment to try to find out how much televising hurts stadium attendance.

•

Drooping price tags: Lever Bros. cut wholesale prices from 3½% to 11% on most of its soaps, detergents, and shortenings. . . . Savarin Coffee Co. shaved 2¢ a lb. from its coffee wholesale price. . . . Four shoe companies—Brown, Florsheim, Freeman, and United States—pruned as much as 9% off shoe prices at retail.

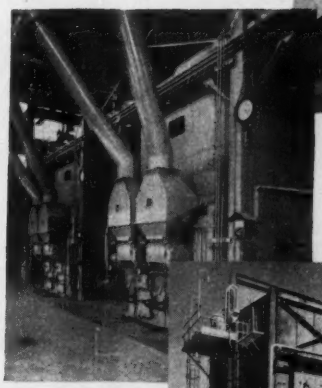
•

Du Pont won an injunction against Du Pont Safety Razor Corp., Chicago, to prevent the razor company from using the du Pont name on its product. Customers confused the two, and the razor company was using the name unfairly, the ruling stated.

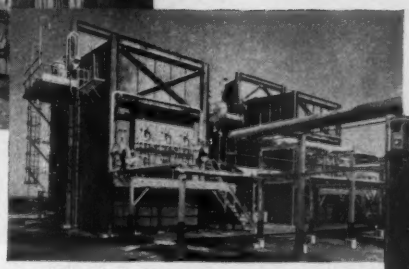


Installation for small plants . . . pressure up to 150 psi . . . capacity to 12,000 lbs. of steam per hr . . . adaptable to any fuel.

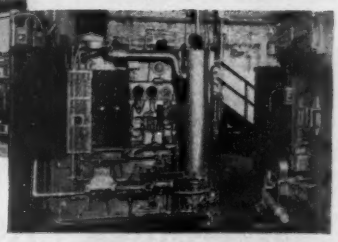
Planning to buy BOILERS ... this year ... next year?



Installation for medium and smaller plants . . . pressure to 475 psi . . . capacity to 60,000 lbs. of steam per hr . . . suitable for any type of fuel.



Installation for larger plants . . . pressure to 1000 psi . . . temperature to 900 F . . . capacity to 350,000 lbs. per hr . . . any fuel or type of firing . . . indoor or outdoor type construction.



Installation for special conditions including very limited space . . . quick steaming (full capacity in 3 min.) . . . fully automatic operation . . . capacity to 6000 lbs. of steam per hr . . . pressure to 300 psi. Ideal for intermittent load.

Sometime this year, or perhaps next, your company may decide to buy new boilers . . . to replace obsolete units . . . to meet increasing steam demands . . . or for a new plant. Whatever the time or circumstances, here's something it will pay you to remember. The operating cost of a boiler is a far more important consideration than its first cost. Why? Because the *annual* cost of fuel *alone* for the average boiler installation usually equals or exceeds the purchase price. And the normal life of a boiler should be 20 to 30 years, or longer.

Obviously, then, the operating economies accruing from better design, construction or application, will quickly offset the difference between the cheapest boiler you can buy and the best the market affords. Here is one case where the old adage "the best is the cheapest" really applies.

In addition to having installed thousands of industrial boilers . . . in every size category from less than 100 horsepower up . . . Combustion has designed and built many of the country's largest utility power station boilers. And it is in this field – the manufacturing of power on a large scale – that boiler design and construction are evaluated most critically and exhaustively.

The fact that C-E Boilers have been selected to meet the exacting performance standards of so many of the nation's largest utility power stations is evidence of the quality of design and construction you can expect to find in any boiler, large or small, that bears the Combustion nameplate.

Our recommendations as to the most suitable type of boiler and firing equipment for the *specific requirements* of your next installation are available to you and your consultants without obligation.

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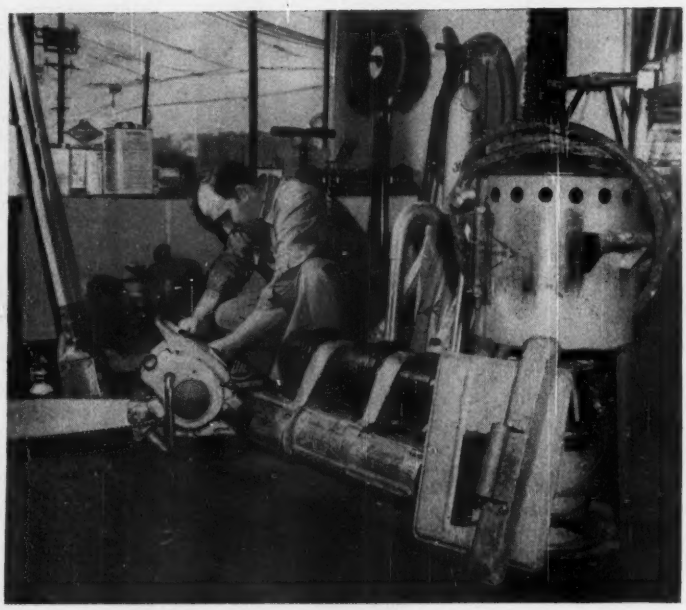
COMBUSTION ENGINEERING—SUPERHEATER, INC.

200 Madison Avenue • New York 16, N. Y.

SMALL BUSINESS



EARL BEDEL adjusts a chain saw in his shop. His full-time business is sending . . .

Rented Tools to the Rescue

Homeowners, beset by rising costs, can do their own repairs—if they can get the equipment. A Cincinnati worker makes a nice living by supplying them with what they need.

For the past 10 years ownership of small homes has been shooting up. And for the past 10 years the cost of repair and maintenance—painting, plumbing, carpentry—has been getting higher and higher.

To the not-so-rich homeowner this sounds like a vicious circle. But to Cincinnati's Bedel brothers, Earl and John, it's a rainbow, with a modest pot of gold at the end. For a fee, the Bedels help close the gap between the homeowner's purse and his upkeep needs.

• **Self Help**—They do it by renting him tools—the expensive kind that the ordinary household can't afford to buy. Reinforced by such labor-saving machines as floor sanders, paint sprays, and chain saws, the homeowner is able to do the work himself, at a very big saving.

The Bedels didn't invent the tool-renting business, nor is it their monopoly. There are at least three other tool renters in Cincinnati; most major cities have them. What does make the Bedel firm unusual is that tool renting is its major, almost its only, activity. Most tool renting is done as a sideline by hardware stores and other enterprises.

The chances are that more and more people will follow the Bedels into the exclusive tool-renting business, partly because it figures to be increasingly lucrative, partly for the side reasons that first started Earl Bedel.

• **Tired of Job**—Four years ago, Bedel was running a punch press and getting more bored by the minute. Looking for an out, he got his brother John to chip in on the purchase of two floor sanders. They put a small for-rent ad in the paper and waited for business.

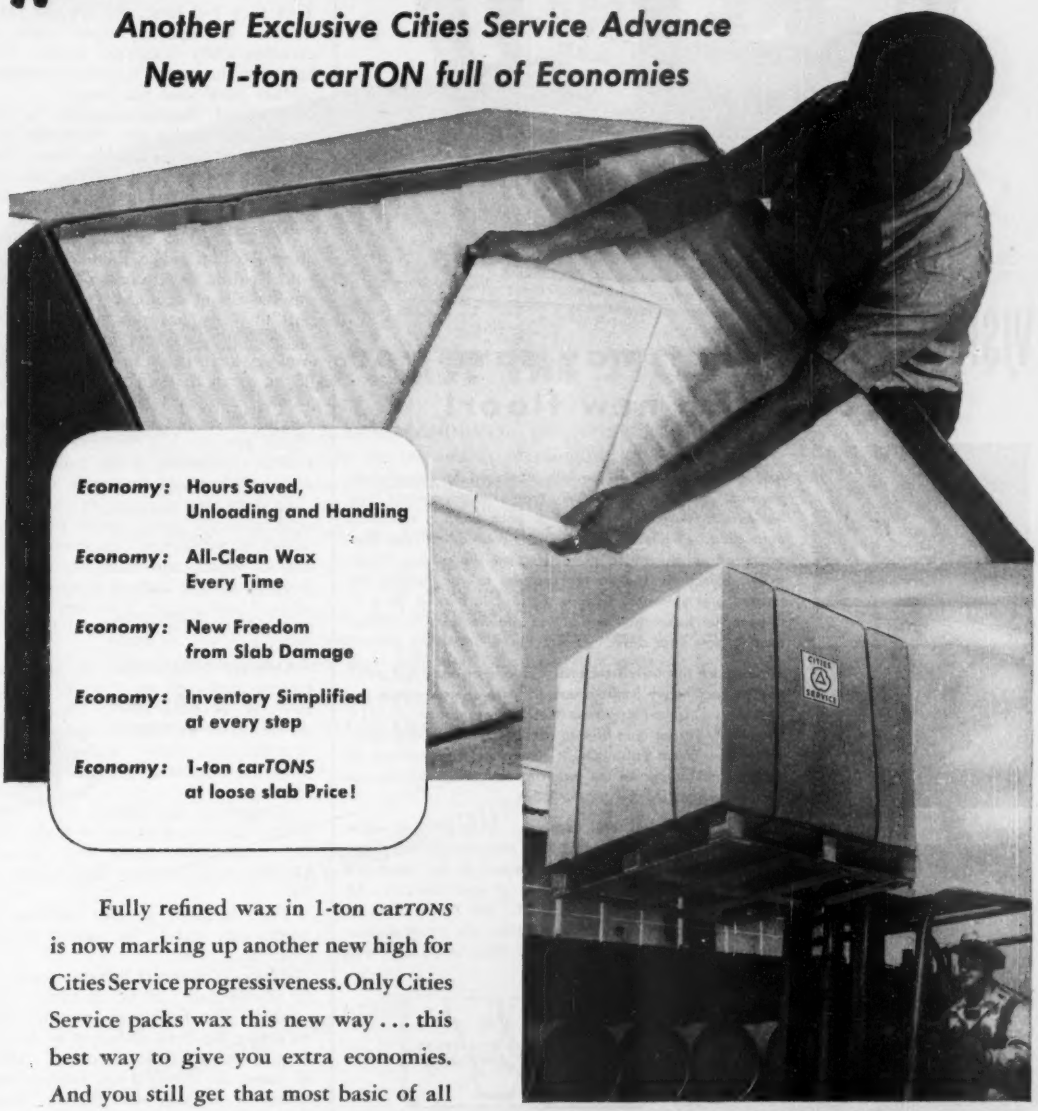
Earl Bedel's wife took orders by phone during the day, while he kept on at the punch press. Evenings, Bedel delivered the sanders to customers and coached neophytes in how to run them.

After two years, business and tools had multiplied to a point where Bedel quit his job, and set up his Rent-a-

NOW! Wax by the carTON

Another Exclusive Cities Service Advance

New 1-ton carTON full of Economies



Economy: **Hours Saved, Unloading and Handling**

Economy: **All-Clean Wax Every Time**

Economy: **New Freedom from Slab Damage**

Economy: **Inventory Simplified at every step**

Economy: **1-ton carTONS at loose slab Price!**

Fully refined wax in 1-ton car*TONS* is now marking up another new high for Cities Service progressiveness. Only Cities Service packs wax this new way . . . this best way to give you extra economies. And you still get that most basic of all economies — the through-and-through quality of Cities Service fully refined wax. Tell Cities Service what you want in wax . . . and what technical assistance you'd like. You'll get all you ask for. Write CITIES SERVICE OIL COMPANY, Room 790, Sixty Wall Tower, New York 5, N. Y.

CITIES SERVICE

QUALITY PETROLEUM PRODUCTS

". . . Aristocrat of the collection is a chain saw . . ."

RENTED TOOLS starts on p. 60

Tool shop full time. By day, he runs it alone; a couple of helpers come in evenings when things get brisker. On Saturday, the biggest day of all, brother-partner John joins the force.

• **Weekend Bargain**—Saturday is big because it's bargain day. Normally, the tools are rented on a 24-hr. basis. On Saturday, for the same fee, you can use the tool from noon until Monday morning.

Weekdays, the evening rush starts around 6 p.m. when homeward-bound workers drop in to choose their weapons for a bout of house fixing.

Rent-a-Tool has now acquired a collection of 35 different types of tools. Among them, they can cope with most of the things that afflict a home. Rentals range widely. The cheapest items are house jacks and posthole diggers, which can be had for 75¢ a 24-hr. stretch. Aristocrat of the collection is a tree chain saw that goes for $12.

In between are a wide variety of sanders, drills, paint sprays, plumber's worms, paperhanging equipment, chain hoists, ladders, and whatsit's. Most in demand are the various types of floor sanders and edgers that can be had as a combination at a rental fee from $5 to $8.

• **Delivery**—Nine-tenths of the customers pick up their tools, though there is no extra charge for delivery on the more expensive items. On the cheaper ones, there's an indirect fee, since the minimum delivered rental is $3.

Altogether, the Bedels have sunk $5,000 into their stable of tools. On this modest investment they grossed $12,000 in 1950, their biggest year so far.

That includes a sales sideline of paints, etc., put in by request of the clientele.

Rent-a-Tool carries liability insurance on all the tools. So far, it hasn't been needed. The Bedels say proudly that no renter has been damaged by a tool, despite the somewhat ferocious nature of some of them. One kibitzer was bitten by a chain saw, though, when the renter left it untended.

The company is insured against theft by outsiders, but can't get coverage against its customers. To date the only losses have been a sander and an extension ladder, both kidnapped by customers who gave bogus names.

• **Basically Simple**—Most customers do pretty good jobs with their tools, once Rent-a-Tool has briefed them. Earl Bedel says that's because most tools "are basically simple."

HOW YOU CAN HELP EASE THE STEEL SHORTAGE...

WRITE A MEMORANDUM to your operating supervisors and foremen . . . tell them the importance of rounding up the scrap and the broken equipment in their departments . . . ask for lists of obsolete and over-age machinery that can be sold at today's high scrap prices—that can help pay for new, modern machinery.

All this scrap will find its way promptly from your scrap dealer back to the mills to produce more much-needed steel . . . each ton of scrap helps make 2 tons of steel. Steel shortages will be greatly eased if you and your operating people start a plant scrap drive today. The memorandum below may help you compose your own . . .

REPUBLIC STEEL CORPORATION
GENERAL OFFICES • CLEVELAND 1, OHIO

REPUBLIC STEEL

ROUTE TO

MEMORANDUM

TO: OPERATING DIVISION

FROM: EXECUTIVE DIVISION

RE: SCRAP STEEL

Please organize a group immediately to comb your department for the following scrap iron and steel:

1. Broken parts and equipment not repairable.
2. Idle dies and tools no longer usable.
3. Piles of scrap and clippings awaiting pickup by scrap collector.
4. Obsolete and idle machinery no longer usable economically.

As soon as this material is gathered in one central place, notify the Purchasing Agent, with a copy to me. He will then arrange to sell this scrap to a dealer.

Scrap serves two purposes ... it turns idle and useless material into money for us ... and it is badly needed by the steel plants to make more steel. I understand that a ton of scrap helps make 2 tons of new steel. We need steel.

Please start a plant-wide scrap drive today.

READERS REPORT

Hassle Etymology

Sirs:

The letter from Kathleen M. Shaw and the editor's note in the June 16 issue regarding the word "hassle" indicate the wrong dictionaries were consulted.

"Hass" is a good German masculine noun meaning enmity, "hassle" a diminutive form (little enmity), meaning struggle or unpleasant situation. Whether the word came into our language directly or through Yiddish, a German dialect, I do not know.

ALDEN C. WAITE

CULVER CITY, CALIF.

So Near and Yet . . .

Sirs:

Under your picture of Jean Cattier [BW—Jul.14'51,p.42], you say, "He is a noted arbitrator." I've known the man for a long while, never heard that he arbitrated. Don't you mean that he is a noted arbitrageur?

ARCHIBALD HARRIS

NEW YORK CITY

• Not quite. We meant he is a noted arbitrager. Webster's Unabridged says arbitrageur is wrong; arbitrager is correct. That's what the caption read until an enterprising proofreader assumed that such a description in the labor section of BUSINESS WEEK must be a typographical error. Thus Mr. Cattier was transformed from an expert on international monetary exchange into an umpire of labor disputes.

Warm-Up Win

Sirs:

I've been rooting for the White Sox since they were born the White Stockings. Your story on them [BW—Jul. 14'51,p54] was a fine and different approach. But there is one thing wrong with it. If you had said the first official winner the Sox ever had was in 1901, you would have been right, but the Sox won the American League flag in 1900, a year before the league or its clubs were officially recognized. And when it didn't count, they had to go out and win it again after the league was recognized, just to make it official.

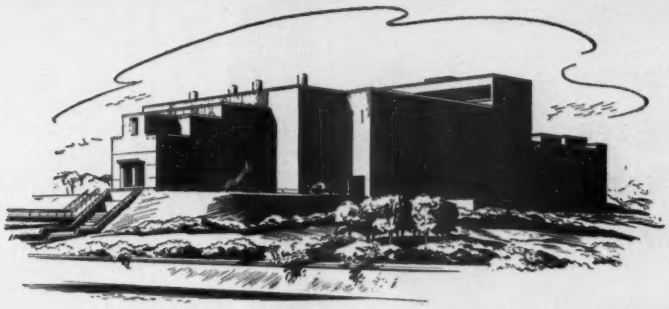
GEORGE GAFFNEY

CHICAGO, ILL.

No Oil Surplus Now

Sirs:

In your story on the Iranian oil crisis, you mention the seriousness of the residual oil shortage [BW—Jun.30'51, p23]. You state that "this shortage was recognized even before the Iranian



Jet Development Laboratory for Pratt & Whitney Aircraft. Albert Kahn Associated Architects and Engineers, Inc.

A PARTIAL LIST OF TURNER CLIENTS

20 CONTRACTS OR MORE

American Can Company
Bell Telephone System
General Electric Company
Great Atlantic & Pacific Tea Company
Pennsylvania Railroad Company
Pratt & Whitney Aircraft Division, United Aircraft Corporation
Scovill Manufacturing Company
SKF Industries, Inc.
Socony-Vacuum Oil Co., Inc.

10 CONTRACTS OR MORE

Abbotts Dairies Company
P. Ballantine & Sons
Carborundum Company
Colgate-Palmolive-Peet Company
Congoleum-Nairn, Inc.
E. I. duPont de Nemours & Co., Inc.
National Biscuit Company
The F. & M. Schaefer Brewing Company
Sears, Roebuck & Company
Alexander Smith & Sons Carpet Co.

5 CONTRACTS OR MORE

Aluminum Company of America
American Stores Company
Bloomingdale Bros., Inc.
The Bullard Company
Federal Telephone & Radio Corporation (Subsidiary of Int'l Tel. & Tel. Co.)
International Business Machines Corp.
Massachusetts Mutual Life Ins. Co.
E. R. Squibb & Sons
United States Gypsum Company
F. W. Woolworth Company

RECENT NEW CLIENTS

American Car & Foundry Co.
Philco Corporation
Safeway Stores, Inc.
Certain-Teed Products Corp.
W. P. Chrysler Building Corp.
Ciba States Limited
Electrolux Corporation
Gulf Refining Corp.
Johns-Manville Corp.
Minnesota Mining & Mfg. Co.
Yale & Towne Mfg. Co.

Cradle for jets...

In East Hartford, Connecticut, stands one of the most modern laboratories ever built for the development of jet airplane engines.

Operated by Pratt & Whitney, this plant represents the 23rd contract this company has placed with Turner.

It is also the 14th scientific laboratory which Turner has had the privilege of building for American industry during the past 49 years.

Turner Construction Company

FOUNDED 1902

BOSTON CHICAGO NEW YORK PHILADELPHIA

crisis" and speak of the "tremendous quantities" of heavy heating oil that will be needed soon.

What has happened to the "long-range surplus problem" of the residual oil industry, which you spelled out in a story called "There's Still Too Much Residual Oil" [BW—Nov.5'49,p25]?

JOHN R. WEAVER

PHILADELPHIA, PA.

• The 1949 surplus was a problem only on the West Coast. The West still has a relatively larger supply of residual oil than the East, but the surplus evaporated under pressure of Korean War fueling requirements and heavy shipments to the East during 1950. Over-all consumption of residual is going up, too. Demand so far this year is 9.4% higher than for the same period last year. Furthermore, a change in the price relationship of residual and coal has favored oil consumption.

That $50 Red Hat

Sirs:

The interview with psychologist Dichter dealing with the importance of mood to the success or failure of advertising [BW—Jun.23'51,p68] brings to mind the story of "Why Did Mrs. Solski Buy a $50 Red Hat on Wednesday?"

One Wednesday afternoon, Mrs. S., a regular patron of the millinery department who was never known to pay more than $7.50 for hats, bought a plush number, daring red, priced at $50. This caused something of a stir in the department. The buyer, deciding the sale was the beginning of a trend, wired for a dozen more of the same style. These he eventually disposed of at prices from $25 down.

What actually had happened was that Mrs. S. had quarreled with her husband about the size of her household allowance. To get even with him for his stinginess, she decided to buy something extraordinarily extravagant and at the same time useless to her husband. The red hat was the thing.

One interview with Dr. Dichter would have prevented the millinery buyer's mistake. For, if he had given thought to the mood of his public as exemplified by Mrs. Solski, he would have realized that he was mistaking a peeve for a trend.

T. O. WHITE

BIRMINGHAM, ALA.

Letters should be addressed to Readers Report Editor, BUSINESS WEEK, 330 West 42nd Street, New York 18, N. Y.

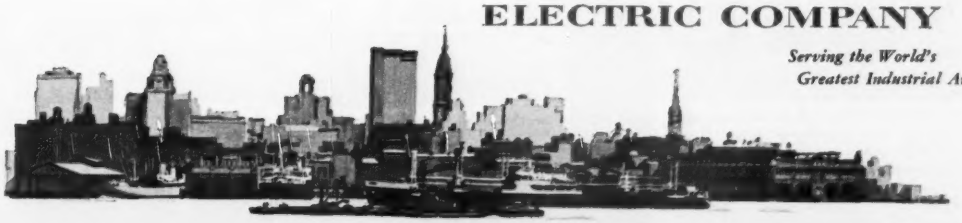
PORT OF PHILADELPHIA

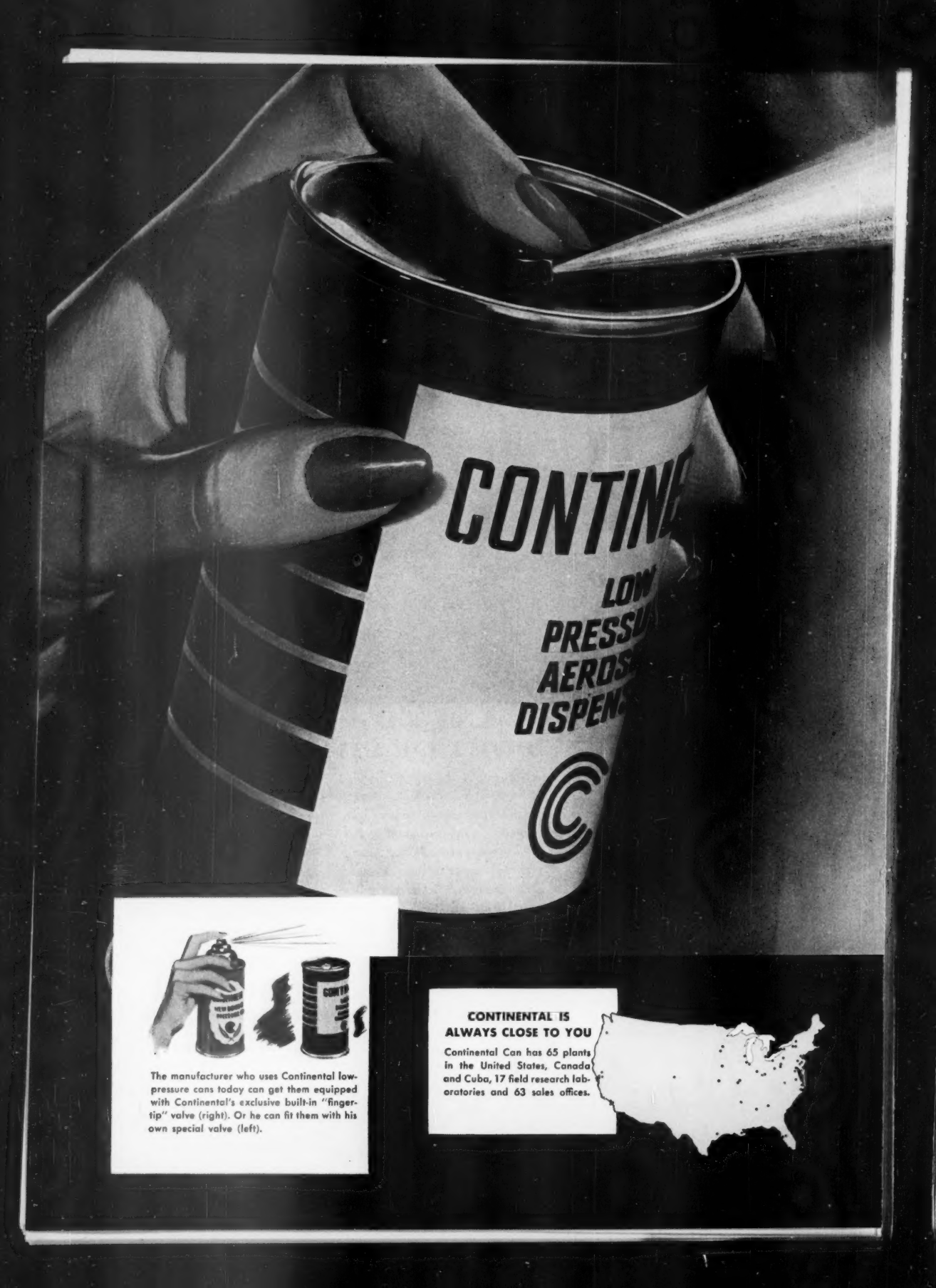
Put Your Plant at the Doorway to the World...

The Port of Philadelphia is the logical export-import center of the nation. This port—second largest on this hemisphere—has many miles of deep-draft channel reaching hundreds of piers; and trains and trucks roll right to shipside. Central to the heaviest concentration of population, production, and wealth anywhere, with new steel mills and other enterprises springing up, the Philadelphia Port Area is viewed—from coast to coast—as the Land of Opportunity. Here is electric power in abundance—ready for today's needs and geared for steady expansion. Please write for details.

PHILADELPHIA ELECTRIC COMPANY

Serving the World's Greatest Industrial Area





The manufacturer who uses Continental low-pressure cans today can get them equipped with Continental's exclusive built-in "finger-tip" valve (right). Or he can fit them with his own special valve (left).

CONTINENTAL IS ALWAYS CLOSE TO YOU

Continental Can has 65 plants in the United States, Canada and Cuba, 17 field research laboratories and 63 sales offices.

Pss-sst

Have you heard how Continental developed the popular low-pressure aerosol can-and-valve?

Originally all aerosol products were packed in heavy steel "bombs." These are pretty good—but they can't help being expensive. So Continental research people said:

"Why don't we find a way to put these efficient aerosols in an inexpensive, disposable can? Then more people could afford the convenience of self-spraying insecticides, deodorants, paints, waxes and other products."

Our scientists went to work. They soon discovered it wasn't necessary to use aerosol "propellants" that developed high pressures—around 70 lbs. per square inch. A pressure of 35 lbs. worked just as well for many sprays, and didn't require a heavy steel "bomb" structure for the package.

So Continental researchers developed a proper combination of materials to give a satisfactory *low-pressure* aerosol. Next they tackled the problem of the container itself. Because of their experience with other cans designed to hold pressure, they knew just what kind of can to build.

But the valve for a low-pressure aerosol presented a brand-new problem—and without the proper valve, the whole idea might have flopped. After several years of intensive research, the engineers came up with the answer—the built-in "finger-tip" valve.

Presto—the Continental pressure aerosol can was a practical reality, and in just a few months it appeared in stores all over the country, packed with dozens of convenient, useful products.


PAINTS


INSECTICIDES


WHIPPED TOPPINGS


LUBRICANTS


WAXES

Serving Industry . . . serving America

The products, the facilities and the people of Continental have been at the service of America since 1905. With other American industries, Continental is now placing an increasing portion of its effort into making our nation strong.

CONTINENTAL CAN COMPANY

CONTINENTAL CAN BUILDING

100 E. 42nd ST., NEW YORK 17, N. Y.


TIN CANS


FIBRE DRUMS

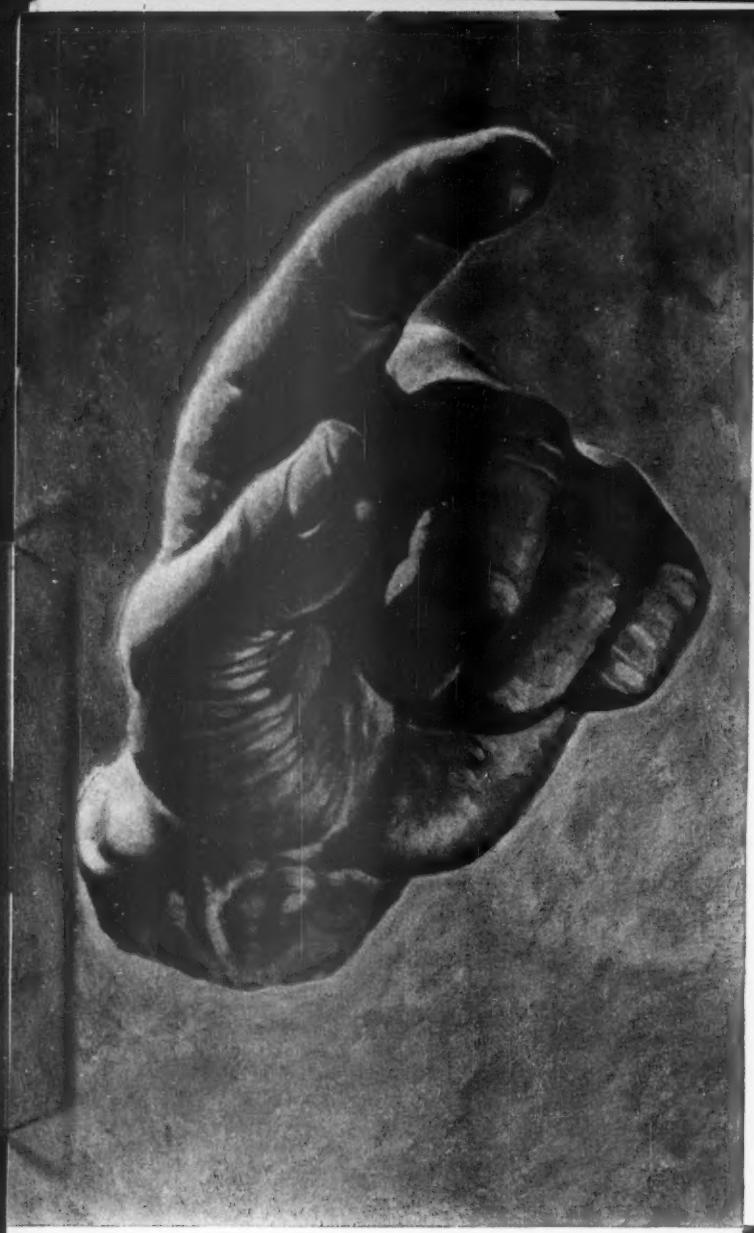

PAPER CONTAINERS


STEEL PAILS AND DRUMS


CAPS AND CORK


PLASTIC PRODUCTS


DECOWARE



POINT OUT that

America has the purest form of human liberty known to man.

Our job is to preserve it.

Expose the Communists who would sell us into slavery.

By their cunning lies they are trying to sabotage American ideals.

POINT OUT those who would destroy FREE MEN.

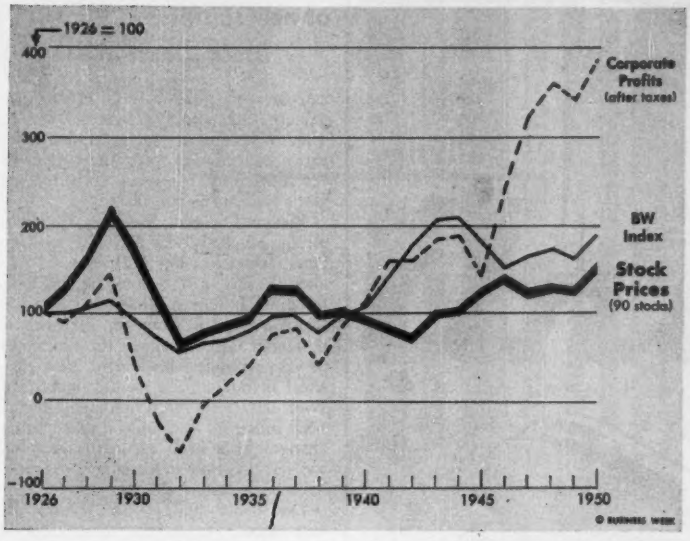
BOHN

BOHN ALUMINUM & BRASS CORPORATION
GENERAL OFFICES: LAFAYETTE BLDG. • DETROIT 26, MICHIGAN

PISTONS • BEARINGS • EXTRUSIONS • CASTINGS • FORGINGS
INGOTS • AUTOMOTIVE REPLACEMENT PARTS • AIRCRAFT PARTS

TELEVISION!
"American Forum of the Air"... Every Sunday Evening on NBC Television
Consult Your Newspaper for Time and Station

FIGURES OF THE WEEK



WALL STREET and business have been falling out of step since World War II.

SEVENTEENTH OF A SERIES

The Market: Broken Barometer

The answer to the age-old question of the chicken and the egg depends on which story you choose to believe. But one thing has been proven beyond any doubts: The chicken and the egg are related. That's pretty much the same way that people viewed the relationship between the stock market and general business conditions—until the last decade.

The market trend and the general trend were always figured to be directly connected in one way or another. Maybe the market was the forecaster of the general trend; maybe it reflected it; maybe its trend came at the same time as a new general business trend; or maybe one was the cause of the other movement. But whatever the case, everybody figured that if you kept your eye on the stock market you were watching business in general.

• **Falling Barometer**—That view—in one form or another—persisted and seemed to be borne out by facts until the beginning of World War II. From then on the picture changed markedly (chart), and the market, which had once been considered the No. 1 business barometer, turned out to be something far less than that. During the postwar period it has almost come to the point where the market and business are in some kind of inverse relationship, although that probably isn't too accurate a way to put it either.

But one thing is certain. The stock market is still an important mechanism in the U. S. economy, and what it's doing means something. This week's Figure of the Week, Standard & Poor's 90-stock price index, doesn't tell what the market means, but it does tell what it is doing—to some extent at least.

• **Standard & Poor's Formula**—The figure is made by averaging the daily index put out by Standard & Poor's Corp. for each trading day of the week. As it appears in BUSINESS WEEK, it is a weekly average of a daily index.

Standard & Poor's has picked a list of 90 stocks it figures give an accurate picture in miniature of the whole market. These 90 are broken down into three groups: 50 industrials, 20 railroads, and 20 public utilities. An index is published for each of the three groups and for the composite of all of them. Since the fact that one stock sells for $25 and another sells for $100 has nothing to do with their actual importance, says S&P, each stock is weighted on the basis of the market value of outstanding shares. The number of shares outstanding times the market price per share gives the dollar value of the issue.

Using these total market values, S&P

". . . the market price drops in proportion to the number of new shares . . ."

STOCK MARKET starts on p. 71

calculates its daily indexes. It uses the value of outstanding shares in 1926 as 100. The result is an index that varies with market price fluctuations in relation to the number of shares of stock that are in the market.

• **Balanced-Stocks Factor**—Just about all the stocks in the S&P list are top-grade securities, but S&P tries to balance the list so that no stock will have too much influence. It recently dropped General Electric from the list because it figured GE influenced the index out of proportion to the weight that electrical manufacturing should have. Du Pont has never been included in the S&P index for the same reason. Other changes have been made in the past, too. At one time or another, 143 stocks have been among the 90.

• **Dow-Jones' System**—S&P's isn't the only attempt to make a number out of the market. Another widely used set of figures are those turned out by Dow, Jones & Co. D-J puts out stock-price averages for a list of 30 industrials, 20 railroads, 15 utilities, and for the composite of the 65. They are available every hour when the market is open, so they are probably the most often used.

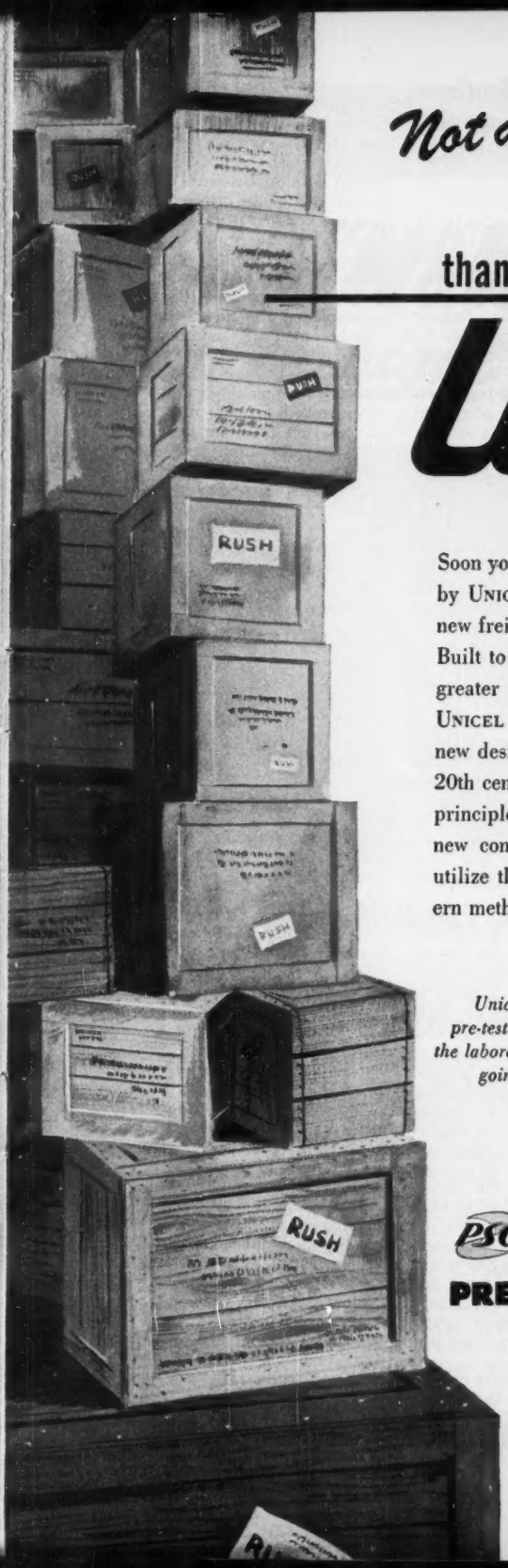
The Dow figures are also based on a list of high-grade securities, but they are not indexes; they are the average of prices of the stocks in the group. But not quite. Although when the averages were begun it was simply a case of adding up the prices and dividing by 30, 20, 15, or 65, it doesn't work that way anymore. Stock splits have changed the original divisor. Whenever there's a stock dividend or split, the market price drops in proportion to the number of new shares, without any real change in the market situation.

So in order to keep this kind of thing from fouling up the average, Dow-Jones reduces the divisor by what it figures is the right amount each time there's a split or stock dividend. As a result, the divisors are now down to 6.9 for industrials, 13.9 for rails, 13.25 for utilities, and 37.25 for the 65 stocks.

Dow-Jones won't tell how they decide on the amount to scale down the divisor each time.

Standard & Poor's, on the other hand, doesn't figure it's necessary to do anything to its daily indexes when splits or stock dividends are declared. Since their figures are based on the total value outstanding, nothing really happens when 1-million shares of $2 stock become 2-million shares at $1.

The D-J averages—with its hourly read-



Not a broken crate in a carload...

thanks to

Unicel

the *revolutionary* new freight car

Soon you will be able to ship by UNICEL—the first really new freight car in 52 years. Built to carry goods with greater safety and economy, UNICEL is *stronger* because of new design features based on 20th century engineering principles; *lighter* because new construction techniques utilize the advantages of modern methods of lamination.

Unicel has been thoroughly pre-tested on the road and in the laboratory. It is now undergoing official road tests on one of the nation's largest railroads.

- **A specially cushioned floating draft gear absorbs impact shock and pull jolts—results in 66% less road shock.**
- **Longer than ordinary cars, UNICEL can carry a bigger payload.**
- **Wider doors mean easier loading.**
- **Built-in Unistrapping eliminates dunnage, secures loads safer.**
- **Smooth interior with no cracks, pockets or corners to hold dirt makes UNICEL easier to clean and keep clean.**
- **Easily converts to a refrigerator car superior in every way to conventional refrigerator cars—carries more, maintains a more uniform temperature, reduces condensation and dehydration to a minimum.**
- **More durable, UNICEL costs less to operate, maintain.**

For full information now—write:

PRESSED STEEL CAR COMPANY, Inc.

6 N. Michigan Avenue, Chicago, Ill. • 230 Park Avenue, New York

". . . she bought Southern Pacific stock because she heard it was going to be a hit . . ."

STOCK MARKET starts on p. 71

ings—is usually the favorite with traders who follow the famous Dow Theory. Dow Theory is a method—some people call it a cult—that attempts to forecast what the market is going to do by watching how it behaves at certain critical high and low points. These points are usually figured on the D-J averages. Probably there are more people in Wall Street who don't believe in Dow Theory than there are people who do. But everybody watches the averages anyway.

• **Runners-Up**—Besides S&P and Dow-Jones, plenty of other financial organizations and publications come out with figures that in one way or another claim to gauge the market. But there are at least minor loopholes in all of them.

For one thing, if an index or an average is based on high-grade stocks, it isn't always showing what's happening to the lower-grade ones. Even assuming that every major swing up or down in the market carries all stocks along with it, that still doesn't mean that the lower-grade ones are moving at the same rate. Besides, when organizations such as investment trusts and others that buy top-grade stocks are buying heavily, their action puts more pressure on these stocks than it puts on the market in general.

• **Take Into Consideration . . .**—And there are also trends within trends that may not show up at all or else may influence the total out of actual proportions. If stocks of one or a group of allied industries start climbing especially rapidly, they may pull the whole index or average up when the rest of the market isn't climbing. You have to take the figures apart to find that sort of thing.

There's no doubt that in general these figures go the way the market does. In 1929 everybody's figure was high and then fell sharply. The same for 1937 and 1946 when the market was up and then down. And in 1932 and 1933 it didn't matter whether you looked at the figures or the faces—you saw the same thing. Things were low. Maybe somebody's figure showed that absolute bottom came in one month and somebody else's came a couple of months before or after. But that didn't matter too much.

• **Other Figures**—Price indexes or averages aren't the only figures that traders watch. There are plenty of other kinds that at least someone believes in as market indicators. Some observers follow the number of new highs and new lows set each day, and they claim they can spot the trends and their direction from them.

Others use a string of figures from interest rates to blast-furnace operations as their keys to the picture. And a lot more use odd-lot sales figures. Odd-lot followers use the widely and perhaps wisely used theory that the public is always wrong. They figure that when odd-lot sales (less than 100-share lots) are increasing at a high rate, it means that the public (the uninformed speculators) are coming in. And when that happens, they figure almost automatically that it's time to get out.

• **Amateurs Beware**—It may be a cynical view, but there are probably more gags about the public in Wall Street than there are about traveling salesmen. Stories about the Broadway theater wardrobe mistress who bought Southern Pacific because she had heard it was going to be a hit also are supposed to have affidavits to back them up.

At any rate, the amount of information that a man would have to have just to survive as a trader in the market makes it look as though the odd-lot followers know what they are talking about when they reduce the rank amateur to a negative factor.

• **End of the Honeymoon**—The big day for the man on the street on the Street ended in 1929. A lot of people pretty far down the scale had, and then suddenly didn't have, money in the market. A lot of observers say that the psychological effect of these losses to the newsboys, bootblacks, and other novices was enough by itself to start the business bust. And even though there were other factors—like the agricultural depression of the 1920's—that contributed to the bust, they still figure that it was the market break that caused it rather than forecast it or simply was part of it. That probably is as moot a problem as anyone can put.

But moot is probably the best word you can use to describe the whole issue of whether you can forecast market movements and whether market movements are directly connected to business movements. There is a pile of evidence in the form of statistical, economic, astronomical (sunspots), and possibly even astrological information that can be brought up to support practically any hypothesis about the market and business. But it is doubtful whether you can prove anything beyond a shadow of a doubt.

• **The Postwar Picture Is Different**—When you look at movements of the postwar period, it's possible to give some explanations for the apparently inverse relationship of the market and business. In the first place, the market has always been considered as the great discounter. Presumably, the combined

WHEN YOU SAY "N&W" you're right!

CUSTOM-BUILT POWER TO MOVE YOUR PRODUCT

For the past 24 years, the Norfolk and Western has designed and built all its locomotives (with the exception of a few switch engines) in the railroad's Roanoke, Va., Shops.

This is a tremendous, exacting task. A major reason for undertaking it is: *The Norfolk and Western knows the specific requirements of the big job it confronts 24 hours every day, and since we have set our own high standards for performance, we are in a position to create the specific tools necessary to perform that job.*

"A sound theory," you might say, "but has it paid off?"

Let's look at the record —

Today, the N. & W.'s fleet of modern, powerful, coal-burning, steam locomotives is less than half the number owned by the railroad 29 years ago, YET TODAY'S FLEET HAULS MORE THAN TWICE THE TONNAGE. Bigger and better, these symphonies of steel and power haul the greater volume of traffic faster, safer and more efficiently.

Dependability is the keystone in the world-famed performance records of these locomotives. Roller bearings, extended mechanical lubrication, detailed inspection and exacting maintenance, plus a system of modern engine terminals for swift servicing are factors that help assure that dependability around the clock.

Today's N. & W. coal-burning locomotives have consistently established high records of gross ton miles per train hour. This performance is a direct reflection of the N. & W.'s *will* and *skill* to provide only the BEST in rail transportation for shippers and receivers of freight. Their speed, safety, and "Tailoring for the job" are more reasons why —"WHEN YOU SAY 'N&W', YOU'RE RIGHT!"

The **DEPENDABLE** ***Norfolk and Western Railway***

judgment of everybody involved in transactions discounts every possible influence on every phase of the market, economic, political, psychological. The world political situation has been precarious since 1946. And a lot of people figured that's why the market hasn't looked so well as business during the period.

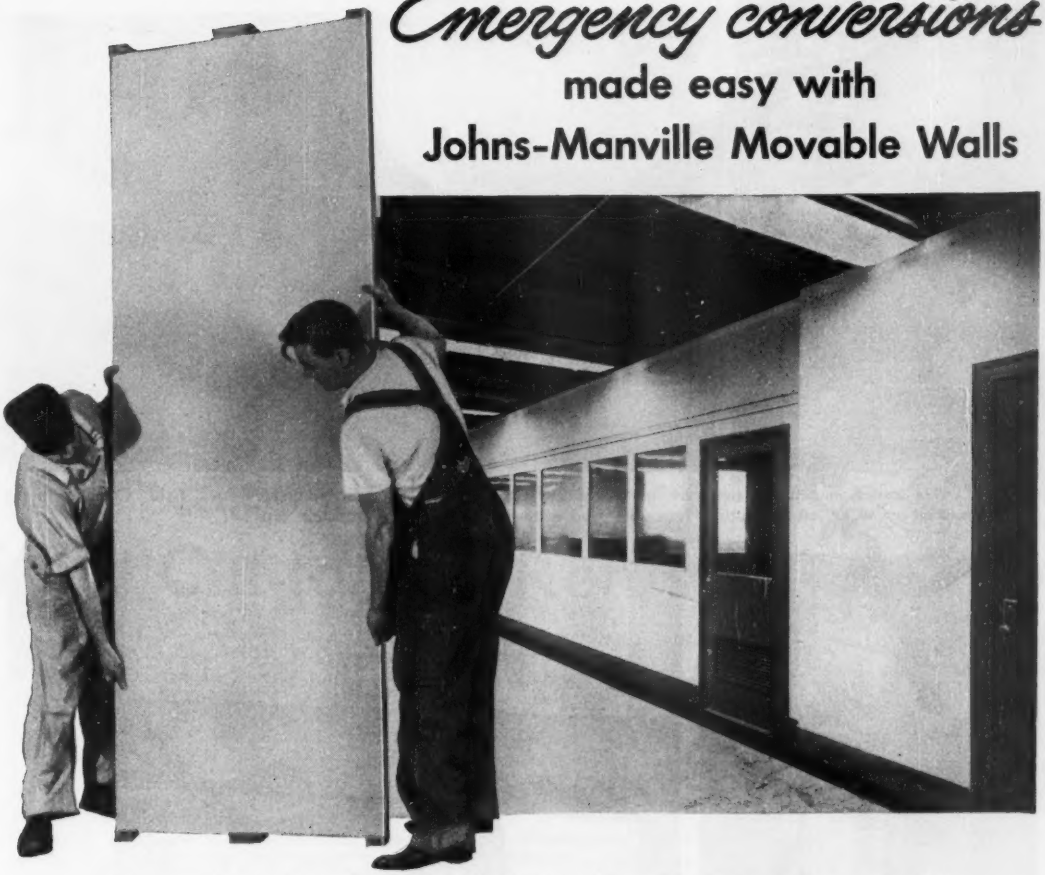
The tax outlook has a lot to do with it, too, probably. Expectations have been for higher and higher taxes, which generally mean scaled-down earnings and dividends. Before the war, stocks tended toward a price equal to about 15 times earnings. Since the war, they've been about six to eight times earnings, and at least one of the reasons for that switch has been tax boosts and prospects of more of them. Today many people figure stock prices in terms of dividends rather than earnings because the stockholder will never see a lot of the company's earnings. A big hunk goes for taxes, and another hunk is plowed back into the business; so what the company earns and what the stockholder gets in dividends have become two different things.

• **It Can't Always Be Explained**—Wall Street experts say that a lot of the turns of the market are purely technical moves that can't ever be connected with business. Back in the 1920's when everybody and his uncle were in the market, these moves probably scared a lot of people who didn't understand them. As a result they affected business in general. More recently, however, when market activities have been confined pretty much to people who know their business, this element has been played down—although in the last two or three years the public again seems to be turning to stocks, higher-grade ones mostly.

There are probably plenty of other likely explanations for this switch in the role of the market. One may even be that, for many years, market prices were about the only good business figures generally available. Since then Securities & Exchange Commission regulations have required more corporate figures, and government and other organizations have made available many new figures on other phases of business. Maybe the market never went the way business did; perhaps there just wasn't any way of being sure how business really was doing. Or maybe the whole basic relationship between the market and business is changing.

At any rate, the market still represents what a lot of people—many of them well-informed—think about securities, business, wars, peace, politics, and economics. It represents what they hope and expect. Sometimes they are wrong. Maybe they have been especially wrong lately. You just can't pin it down.

Emergency conversions
made easy with
Johns-Manville Movable Walls



Because Johns-Manville Universal Movable Walls are made of non-critical defense materials, they give you complete freedom in planning of space arrangement in these days of expansion and change.

● Reallocation of existing space and partitioning of new space can be done easily and quickly with Johns-Manville Universal Movable Walls. Made of asbestos, these walls are ideally designed to help business and industry meet the space problems involved in the defense effort.

The flush panels have a clean, smooth surface that's hard to mar, easy to maintain, and are extra strong to withstand shock and abuse. They're light in weight, easy to erect and relocate. The "dry wall" method of erection assures little or no interruption to regular routine.

Johns-Manville Walls may be used as ceiling-high or free-standing partitions. The complete wall, including doors, glazing and hardware, is installed by Johns-Manville's own construction men under the supervision of trained Johns-Manville engineers—responsibility is undivided.

An estimate will convince you that the cost of J-M Movable Walls compares favorably with other types of wall construction. For full details, write Johns-Manville, Dept. BW, Box 158, New York 16, N. Y. In Canada, write 199 Bay Street, Toronto 1, Ontario.

*Reg. U. S. Pat. Off.

JM PRODUCT

Johns-Manville ASBESTOS *Movable Walls*

INSTALLED NATIONALLY BY JOHNS-MANVILLE

CONSTRUCTION

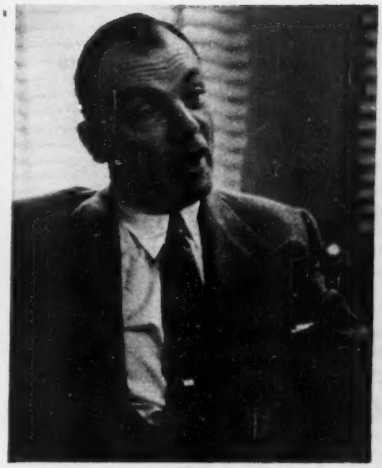
$45 a MONTH rents a one-bedroom apartment in this low-cost rental housing project in North Hollywood, Calif. Cobuilder Burns pulled the rabbit out of his hat by omitting "amenities" and cutting every possible construction corner.

BATHROOM seen here in a mirror opens off bedroom—eliminates separate hall.

REFRIGERATOR AND STOVE are included in upstairs rentals of $50 to $55. Burns uses enameled metal cabinets instead of wooden ones, though cost is about the same.

ACCESS BALCONY formed by ceiling boards cuts out inside stairs and hall.

STORAGE WALL, floor to ceiling, separates living room from bedroom. Saving in non-usable floor space is where Burns makes most of his cost cuts.



BURNS WONDERS: "How would the 608 construction units now renting from $70 to $90 be affected by a healthy volume of low-cost rental projects?"

Short Cut to Low Rents

FOR RENT: New one-bedroom apartments. Good location. $45 to $55.

Two years ago, that advertisement in a Los Angeles paper would have caused a stampede—or a cynical sniff. Today, it's a bona fide fact.

Fritz Burns may have started something when he decided to cash in on the need for low-cost rental housing. He has already completed a 16-unit apartment house where one-bedroom apartments rent for $45 to $55—including a Servel refrigerator and stove. Next month he will start an additional 92 units that will include two-bedroom apartments—to rent at about $6 a month more. The North Hollywood (Calif.) project will be a joint venture with J. Paul Campbell.

• **Private Financing**—Burns is no stranger to the building industry. He's a former president of the National Assn. of Home Builders, at present spark plug of Kaiser Community Homes. He decided that low-cost housing offers the best opportunity and the safest investment for builders who have to find some new field, now that the government 100%-financed housing honeymoon is over. For both his projects, Occidental Life Insurance Co. is financing 55% of cost, Burns digs up the remaining 45%. Financing spreads over a 15-year period, but tax people amortize the building projects on a 30-year basis.

• **Comfort Without Amenities**—Burns couldn't get any help from Federal Housing Administration because he wanted to ax some of the "amenities" that FHA considers necessary. However, he insists he didn't sacrifice sound construction, that he incorporated everything needed for adequate, livable, durable, and sanitary housing. But he did cut down construction costs by careful planning and elimination of space takers.

For instance, the bath opens off the bedroom rather than off the hall. That eliminates a partition and hallway, cuts down floor areas—and costs. The bedroom is separated from the living room by a floor-to-ceiling redwood storage wall. A chin-high cabinet is all that sets the dining room off from the kitchen.

Apartments have a "ranchlike" roof. That is, there's no space between ceiling and roof. Between first and second floor apartments, there is a combination ceiling and floor.

A "Monterey balcony" provides access to second-floor apartments, eliminates need for inside stairways. Exposed beams supporting the second floor (and first-floor ceiling) continue out from the apartments to form the support for the balcony. The second-floor ceiling likewise continues unbroken and becomes the roof of the balcony.

Burns left out basements and garages altogether. He figures that a basement isn't essential because each apartment is equipped with an individual wall gas

". . . he concedes that the $35 rental figure is not impossible . . ."

LOW RENTS starts on p. 78

furnace and Hotpoint water heater. Garages aren't too necessary in California climate.

• **. . . and Washers, Too**—As an extra feature, Burns added laundry rooms, with coin-operated automatic washers and dryers—one for each eight apartments. He also built storage rooms, with closet for each apartment.

Other economies include acid-stained and waxed concrete first floors; door and window openings sized and located to minimize cutting; unified identical plumbing on first and second floors.

Burns says there's nothing to limit his low-cost apartments to California's climate. By increasing sheathing to take care of weather, they can be built almost anywhere in the U. S.

• **NAHB Likes It**—Burns' project made headlines at the National Assn. of Home Builders' April conference on low-cost rental housing, held in Memphis, Tenn. There was another example of low-cost rental exhibited: a 29-unit project for Negroes had one-bedroom units renting at $37 and two-bedroom units at $45.

Burns' project is a refinement of an earlier eight-unit apartment house in Long Beach, Calif., built at a cost of $29,000, and renting for $50 a month. The builder, Walter Wilson, also set up a 16-unit structure for $54,000. Both were 100% privately financed. In publicizing the Wilson project, the American Legion estimated that, complying with FHA structural requirements, the eight units would have cost as much as $50,000; also that under FHA financing, the apartments could be built to rent at $35 a month.

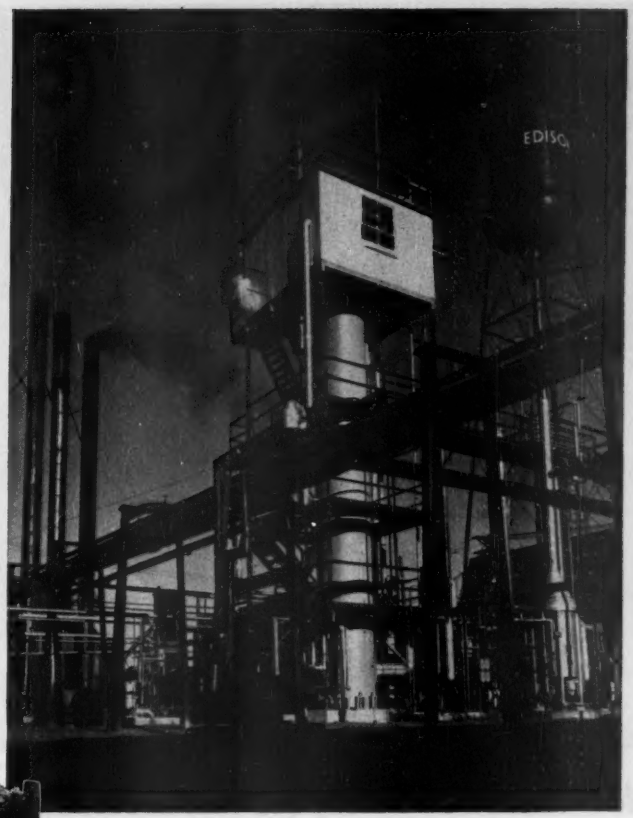
Burns won't go all the way on that. He figures there's a 15% differential between the cost of the building as it stands and the cost under minimum FHA requirements. That 15% includes additional ground coverage as well as additional construction costs. But he concedes that the $35 rental figure is not impossible.

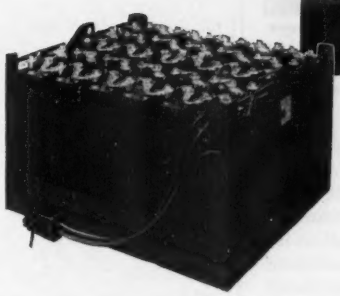
His 16 units cost $60,000, including land. He estimates the value of the land, which he had been holding idle, at $7,000. Construction costs were $53,000. Burns put up $20,000 in cash ($1,250 per unit); Occidental put up $33,000. At an average rental of $50 a month, he gets back almost half his investment the first year—which makes for a fair turnover of equity to keep the pot boiling.

• **Pressure on FHA**—Both the Burns and Wilson projects are attracting con-

AT THOMAS A. EDISON, INC.

"$32,000 a year saved by GIRDLER hydrogen plant"





One active material in EDISON batteries is finely divided iron, so pure it is also used for pharmaceuticals and food enrichment. It is made by reducing ferric oxide with hydrogen.

FOR the manufacture of nickel-iron-alkaline storage batteries, Thomas A. Edison, Inc. requires large volumes of high-purity hydrogen.

The hydrogen is produced in a practically automatic, instrument-controlled Girdler HYGIRTOL* Plant. Hydrogen purity generally exceeds 99.95%. Operation is safe, quiet, and clean. One man supervises the process. And Edison states: "We estimate that this installation saves us approximately $32,000 a year over former methods."

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THE GIRDLER CORPORATION
Gas Processes Division

siderable attention from groups that believe that the best answer to public housing is for private builders to rally round and really dig into low-cost rental housing.

They would like FHA to substitute "performance" standards for "luxury" standards. Builders point out that when FHA tacked up its shingle labor and materials were cheap. Now the strict requirements defeat the reason for which FHA was founded—to provide low-cost housing.

The American Legion housing committee is interested in building adequate houses (at present prices) for $5,200 to $5,300. Nearest thing under FHA would cost $7,500. And public housing units are being set at $12,000 to $15,000 a unit.

Construction Equipment Booms With Expansion

The $1-billion construction equipment industry hasn't lost any time in grabbing onto the coattails of the military and industrial expansion programs. However, the boomlet won't approach the feverish proportions of World War II, because military and allied demands won't be so great—at least short of a major war.

It's largely the anticipated demands for shovels, cranes, and the like—stemming from the heavy schedule of industrial construction—that give the rosy hue to equipment prospects. Military demand since Korea has been disappointingly small, largely because the military had adequate stocks of machinery to handle most of its early post-Korea construction projects. Construction men in Washington don't look for any great surge of military orders, but allied programs—like those of the Atomic Energy Commission and foreign aid—are gobbling up considerable amounts of equipment.

Top officials in the Defense Production Administration and the National Production Authority appear anxious to keep output of equipment above the level required to meet military and allied demands. They've backed up their thinking with comparatively liberal metals alocations under the Controlled Materials Plan. For the third quarter manufacturers got roughly 82% of the metal requested in their allotment applications.

Of course, like everyone else, the equipment builders are having some materials problems. Alloys, especially the ones needed for moving parts, are hard to come by. The serious bottleneck—serious in the sense that it hasn't been solved—is track parts, which have been held up for lack of alloys for tread shoes, links, pins, and rollers.

Public Prefabs

Government-subsidized project buys 91 packaged houses from Gunnison. It's the first deal of its kind—and welcome.

For the first time, prefab houses have been approved for low-rent housing projects under Public Housing Administration. Last week the Chicago field office of PHA announced that a local housing authority in New Albany, Ind., has contracted for 91 prefab buildings to be included in a permanent housing project in New Albany totaling 128 buildings.

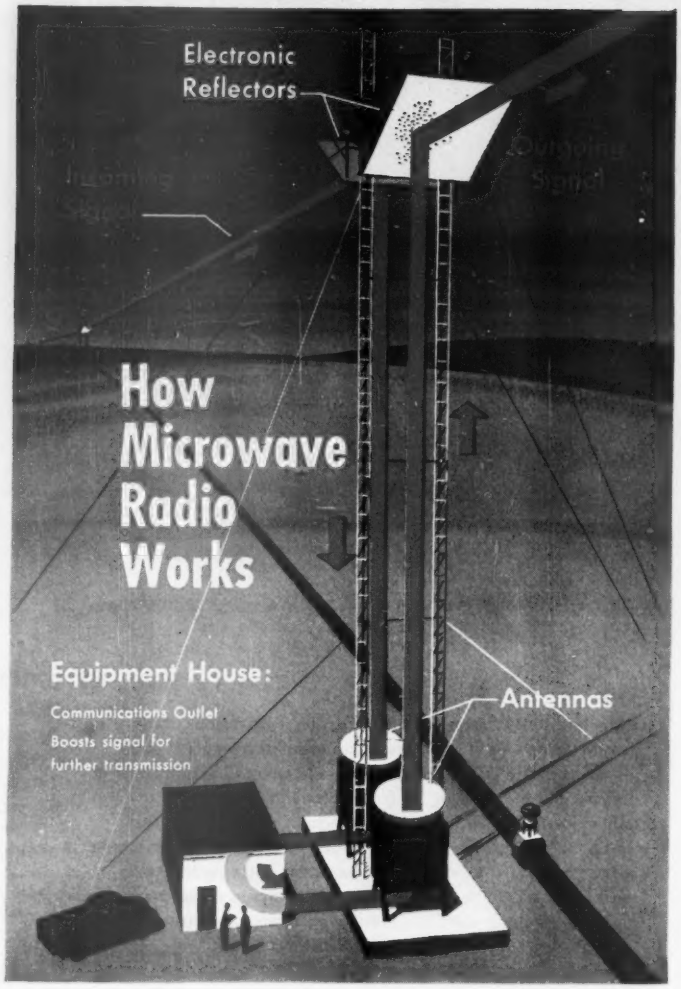
• **Local Prefabber**—Supplier of the prefabs will be Gunnison Homes, Inc., a U. S. Steel subsidiary (BW—Jul.23'49, p20). Gunnison won't have much of a transportation problem; its plant is right in New Albany. That may partly explain the economy of the project: The average room cost is only $1,654—including ranges and refrigerators. According to PHA's Chicago field office, that's the lowest per-room cost among 30 public low-rent projects now under construction in the Midwest area. Total cost of the development, which will house 204 families, is $3,177,385.

• **Welcomed Business**—If this is the start of a trend, it will have started none too soon for the prefab industry. Prefabbers, like other home builders, are feeling the effects of tight mortgage money and credit restrictions under Regulation X (BW—Jul.21'51,p27). The industry did get a fast start this year that put it, at the end of June, about 28% ahead of where it was the same time a year ago. But the outlook for the next six months is gloomy. Early in the year prefabbers talked of selling 100,000 units in 1951. Later they scaled that estimate down to 75,000 units. Now they're hoping for 55,000 units—last year's total shipments.

Take Gunnison's case. Gunnison's plant has a production capacity of about 250 homes a week. Before the New Albany housing authority order came through, the plant was operating at a rate of only a little over 150 homes a week. The company blames this slowdown mainly on Regulation X; the fact that a nonveteran has to put up $1,900 cash to buy a $10,000 house does not encourage sales.

• **Out for More**—Gunnison can take production of 100 more homes a week in its stride. President of the company, Gen. John J. O'Brien, says that Gunnison definitely will compete to sell prefabs in other public low-rent housing projects throughout the country. And it intends to expand its plant, if necessary, to handle this business.

PRODUCTION



For Industry Talk—Microwave

With repeater stations, networks can reach to any length. Industries now have 15,000 mi. in use, with more to come. Utilities and pipelines are the biggest users so far.

Today there are over 15,000 mi. of point-to-point microwave networks being operated by utilities and pipelines. Six years ago the mileage was almost zero.

It's anybody's guess how far that phenomenal growth will continue. James D. McLean, manager of Philco Corp.'s industrial division, predicts that in time all industry will substitute microwave communication for telephone land lines. You can even find some prophets who say that microwave will replace all existing long-distance telephone land lines.

• **Super-High**—This fast-spreading relative of radio has some things in common with television. Like TV, it operates in ultra- and super-high frequencies, hence cannot send much farther than the human eye can see. As a result, a microwave network has to be linked by a series of repeater stations, which pick up the original signal, boost it, and send it on to the next station.

• **Selling Points**—Microwave has a lot of built-in advantages that help make it the darling of large industries with lots of inter-communicating to do.

A microwave can be beamed with remarkable accuracy in a 50-mi. jump. It offers a much closer tolerance than short-wave radio in this respect. Hence, the only limit to the number of microwave networks using a given frequency is that each network must be kept a few miles away from its nearest neighbor. The interference that besets two-way radio is scarcely a problem for microwave.

This accurate microwave signal can accommodate up to 24 separate and simultaneous circuits, handling voice, teleprinters, and telemetering. That's the equivalent of 24 individual telephone lines.

The cost of circuits varies. Roughly, the more and longer circuits you get, the less you pay per circuit mile. As a broad average, each circuit costs between $90 and $150 per mi. By comparison, a one-circuit land line runs from $160 to $280 per mi.

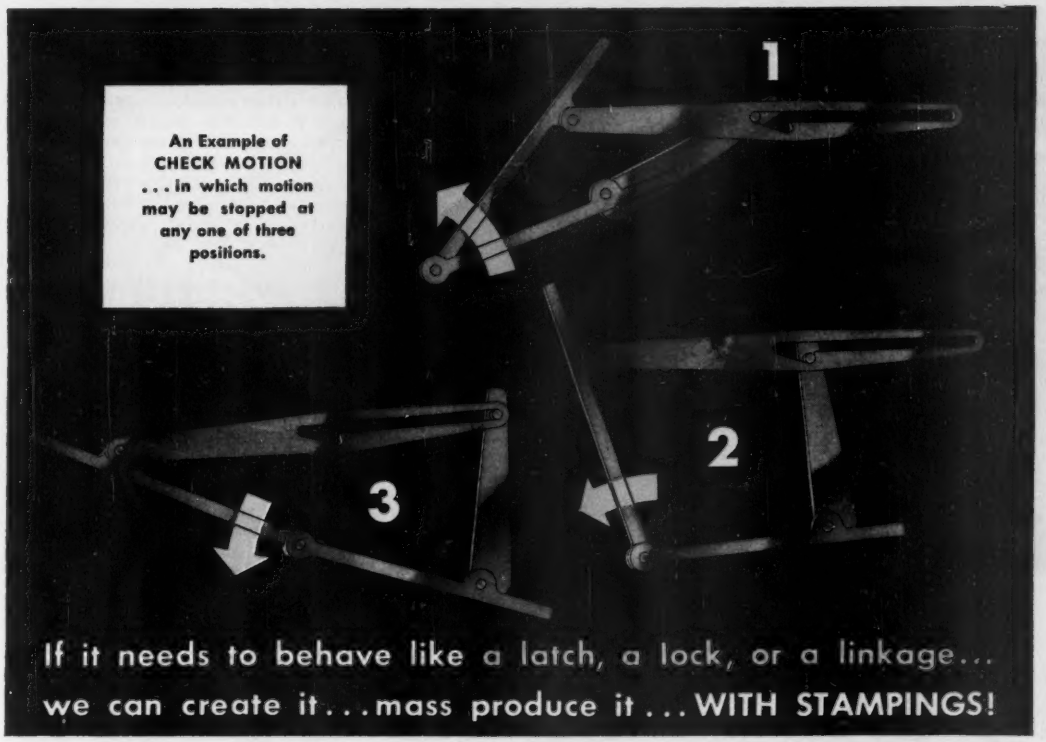
• **Reliable**—Installation cost isn't the only saving. Microwave needs almost no upkeep, while land lines need constant attention, especially in severe weather. Reliability is another microwave asset. Even the worst weather has little effect on it. Static, and fading caused by the ionosphere—the ionized layers of atmosphere surrounding the earth—bother microwave very little.

Operators of power and pipelines find another advantage in microwave. They can use it for remote control of stations scattered along the line. Microwave, for example, will give reliable reports on such conditions as pressure and rate of flow at a gas pumping station. Should the power source fail, the microwave repeater station will automatically start up a standby generator.

• **Developments**—Broadcasting companies were the first to utilize microwave, for intercity networking of television programs. Industry and government soon adopted the networking techniques, arriving at applications like these:

• Bonneville Power Administration, in Washington State, has a 200-mi. installation along its power lines. It handles administrative traffic and coordinates substation operation. This network was installed by IT&T's Federal Telephone & Radio Corp., which is now testing a further system for locating line faults and recording them at headquarters. The detector system is expected to be functioning soon.

• General Electric is building a



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system for Transcontinental Gas Pipe Line Corp., to link Mercedes, Tex., and New York City. This 1,840-mi. network will carry company business and allow station attendants along the pipeline to talk with mobile maintenance crews equipped with two-way radio.

• Dayton, Ohio, uses a Motorola-built installation for police relays. Messages are relayed from downtown headquarters to a location on the edge of town, where they are rebroadcast for greatest coverage.

Microwave has started to spread lately beyond its basic field of utilities, gas, and petroleum. Radio Corp. of America has contracts for systems to (1) control traffic and repairs on the Pennsylvania Turnpike; (2) keep an eye on poachers for the Arkansas Fish & Game Commission; and (3) do remote-control work on experiments by the Atomic Energy Commission.

Maybe microwave sounds like the answer to your company's communication problems; you'd like to order a system. It's not that simple. There's a good deal of routine to go through.

• **FCC Rules**—The first step is to apply to the Federal Communications Commission for a license, similar to those issued for two-way radio. FCC regulations hold that only some industries are eligible. These include power, petroleum, lumbering, and various others. Individual companies in the wrong industries cannot get special treatment on their own merits. Department stores, for example, have been turned down, despite the obvious advantages of being able to link main stores with branches.

Actually, FCC hasn't even got around to defining microwave specifically; its operation is considered experimental and developmental in many aspects. Because FCC hasn't yet set up permanent policies for microwave, the licenses that it issues contain a serious catch. They can be canceled without even a hearing before the commission.

• **Package Unit**—Once a license has been granted, the next job is to pick a manufacturer who will provide the equipment. Generally, most of the gear comes as a packaged unit. Each repeater station is set up complete, with antenna tower, transmitter, receiver, equipment house, and fences.

Optical Tooling Gets Under Way at Republic

Optical tooling (BW—Dec.23'50,p34) is going through its shakedown phase at Republic Aviation Corp. this week. The idea is to prove the flexibility of this method of setting up alignment frames for aircraft assemblies with precision optical equipment. Right now

An Old American Custom...

MODERNIZED THROUGH CHEMISTRY

One fish per hill of corn to maintain soil fertility was an old Indian custom. Although this primitive method was a far cry from modern agronomy, the principle of feeding the soil so that the soil may feed mankind is unchanged.

Today, through the magic of chemistry, Mathieson has taken the lead in the development of high analysis pelletized fertilizers. The modern menu they serve the soil contains up to two and one half times as much plant food per pound as ordinary low analysis mixtures.

Compounded in homogeneous form, each pellet is uniform in completely water-soluble plant food content—provides even distribution in the field so that each plant can receive its necessary quota of food elements. Moreover, these fertilizers flow freely, drill perfectly; and because of their higher concentrations of plant food per pound provide important savings in handling, storage, hauling and application costs.

Helping to maintain and increase the productivity of the soil is one of the many accomplishments of Mathieson's constant research in the production of basic heavy chemicals and many of their specialized derivatives. Mathieson Chemical Corporation, Mathieson Building, Baltimore 3, Maryland.

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CHEMICALS

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there's no doubt that it will live up to the expectations of Republic's engineers.

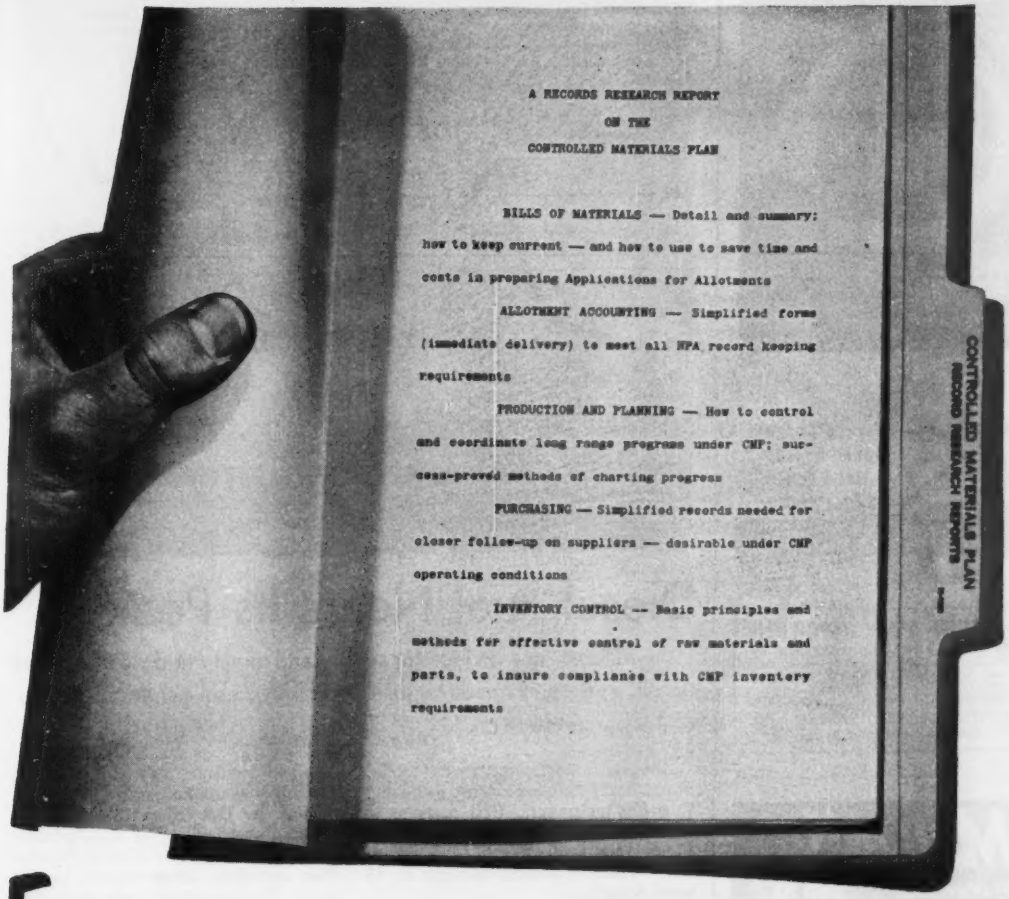
With an Air Force evaluation contract in its pocket, the firm started work a few months ago on alignment frames (called fixtures in the industry) for four different assemblies of four different manufacturers. Now it is shipping, or almost ready to ship, fixtures for the outer wing panel of the North American F-95, a fuselage section of Lockheed's F-94, the Boeing B-47B's wing panel, and the tail-stub assembly for the C-124 built by Douglas.

When the fixtures are delivered, they will be aligned with optical equipment and put on the production line. For the aircraft industry, this is an innovation. Conventional fixtures have always lacked this flexibility because they have been made fast and rigid for the sake of accuracy. Move an old-type fixture to a new location, and its alignment will probably be out a shade.

Republic's project will also show optical tooling's quick comeback potential after an emergency shutdown. Say a plant has been bombed or is threatened by bombing. Its fixtures could be quickly knocked down, shipped to another site, and set up again optically—or new fixtures could be set up from scratch, with the original blueprints. Either way, optical tooling would take much less time than conventional tooling.

Inside Job—On Jet Engine

Harold Kirkendall of General Electric's Lockland (Ohio) plant is probably the first man to work inside a turbojet engine. Only 47 in. tall, he crawls through the afterburners of GE's engines—the tailpipes that give them an extra push in flight—to make general inspections. Although little men and women worked inside airplane wings in the last war, Kirkendall thinks he has a "first" on turbojets.



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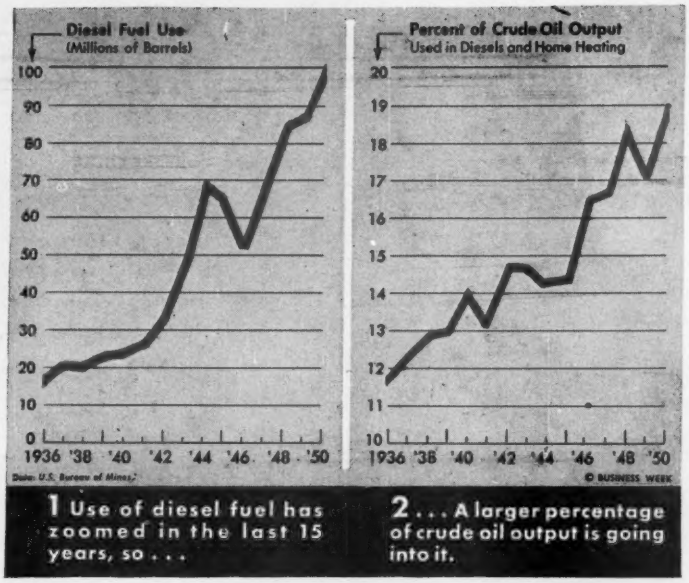


Diesel Fuel Nears Its Peak

From now on look for supply and quality to drop, for prices to rise, as military needs for jet fuel cut into diesel's share of middle-of-the-barrel crude oil.

More and more locomotives, trucks, buses, boats, and tractors are switching to diesel for power. Best measure of the trend is fuel consumption: Last year diesel fuel sales topped 100-million bbl. That's a fivefold increase in 15 years (chart).

But the upswing in dieselization probably will level off soon as a result of an oncoming shortage of diesel fuel, higher prices, and lower quality.

• **Supply Problem**—Diesel fuel is one of many petroleum products that comes from the middle distillates of crude oil—what oil men call the middle of the barrel. Also from the middle distillates come kerosene, stove oil, jet engine fuel, heating oil, and stock for making catalytically cracked gasoline.

All these products fight for a bigger share of the middle of the barrel, but there's only just so much to go around. For many years diesel fuel has been gaining at the sacrifice of the others. Right now it is taking almost 20% of the middle distillates. And diesel fuel and home heating oil together take almost 20% of all crude oil (chart).

It probably won't continue to get that big a share. Growing military needs for jet engine fuel and gasoline will be taking a bigger bite, and diesel fuel production will suffer. Come a major war, even less of this curtailed output would be available to commercial users. The Navy would be taking much of it.

• **How to Get More**—One way to stretch diesel fuel supply is to produce more crude and more distillate stocks. This has been done—almost to the limit. The petroleum industry is producing 40% more distillate stocks now than it did 10 years ago. Trouble is, demand for distillate products has doubled, and there's hardly enough refining capacity left to fill that demand.

Another way to stretch supply is to increase the amount of middle distillate that you can get from a barrel of crude. Petroleum technologists are working hard at this now. They're concentrating on two processes—delayed coking and hydrogenation—to convert, or lighten, residual fuels (the bottom of the barrel) and lift them up to the middle of the barrel.

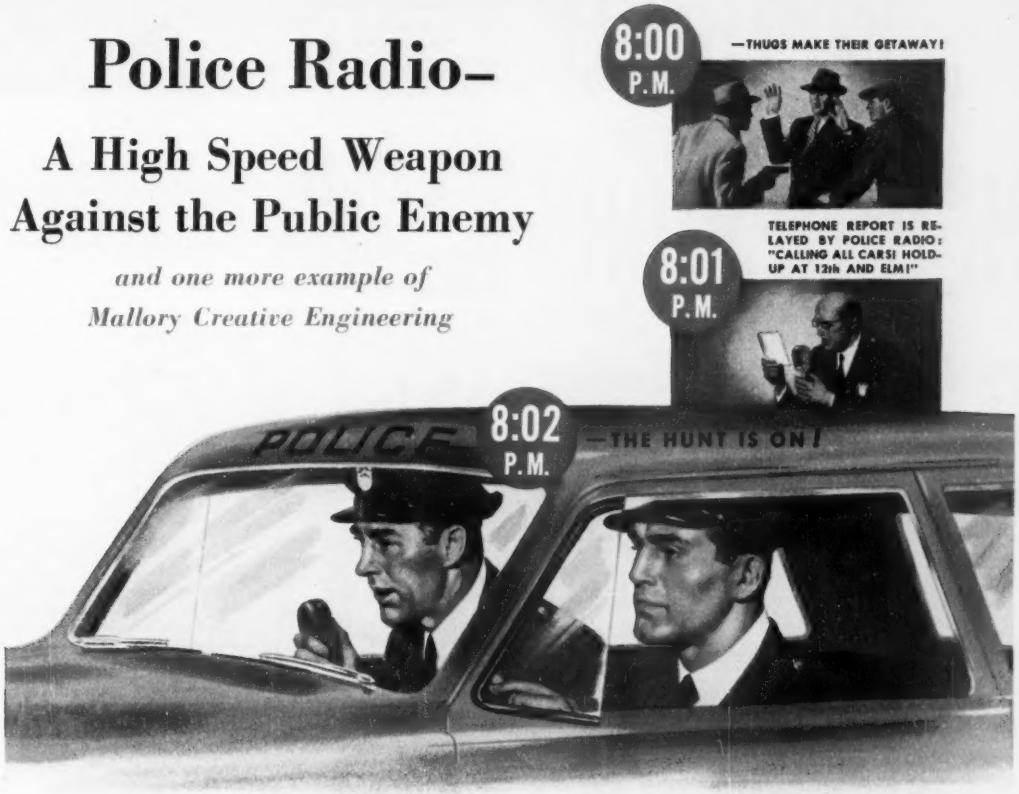
• **Higher Prices Coming**—As demand for diesel fuel outstrips supply, price is bound to go up. Right now diesel fuel sells for less than gasoline. But it stands to reason that refiners won't cut back on their production of higher-priced gasoline to sell more low-priced diesel fuel. Diesel users will have to pay more to get the product they want.

Even so, that won't take all the luster out of diesel's main sales argument—economy. Diesel fuel now gives 40%

Police Radio–

A High Speed Weapon Against the Public Enemy

and one more example of
Mallory Creative Engineering



ONE OF THE LAW'S most effective weapons in the grim, real-life game of "Cops and Robbers" is the police two-way radio. The story of its development offers a striking illustration of how Mallory creative engineering has contributed to the practical dependability of a wide variety of modern equipment

Twenty years ago, Mallory pioneered the compact vibrator which converted power from the automobile storage battery into usable form for radio operation—making automobile radio a practical reality.

Now a Mallory rectifier stack combines with a heavy duty, high output alternator to add to the dependability of two-way radio telephones in police cars, taxicabs, buses, trucks, small boats and military vehicles. Even when the vehicle is operating at idling speed, this alternator-rectifier system generates adequate current to keep the battery charged and provide reliable radio communication at all times.

It is this same Mallory rectifier stack which has demonstrated such rugged durability in battery chargers, electroplating equipment, laboratory testing instruments and many other applications where elevated temperatures would otherwise present a serious problem.

Mallory is prepared to apply its products, facilities and widely diversified techniques to the needs of an accelerated industrial mobilization.

MALLORY

SERVING INDUSTRY WITH THESE PRODUCTS:

Electromechanical • Resistors, Switches, Television Tuners, Vibrators
Electrochemical • Capacitors, Rectifiers, Mercury Dry Batteries
Metallurgical • Contacts, Special Metals, Welding Materials

P. R. MALLORY & CO., Inc., INDIANAPOLIS 6, INDIANA

Manufacturers of any product involving electronics, electrochemistry, electromechanics or metallurgy are invited to make use of Mallory creative engineering in improving designs, stepping up production or lowering costs, through the use of standard Mallory components or specially designed adaptations.

WHEREVER ENGINES WORK

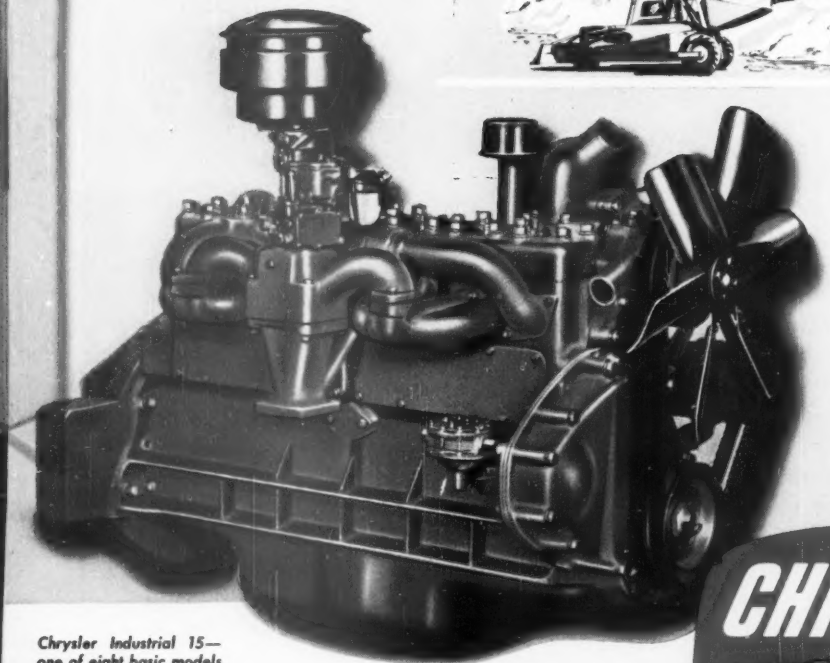
In Construction, Chrysler Powers Ditching Machines • Cranes • Truck Mixers • Shovels • Loaders • Yarders • Concrete Mixers • Road Pavers • Crane Carriers • Scoop Tractors

In Industry, Chrysler Powers Air Compressors • Hoists • Derricks • Pumps • Generators • Tractors • Arc Welders • Baling Machines • Conveyors • Tackle Blocks • Winches

Chrysler Industrial Engines Do a Better Job at Lower Cost!

In Farming, Chrysler Powers Tractors • Combines • Gang Mowers • Spreaders • Irrigation Equipment • Orchard Sprayers • Hay Choppers • Pumps • Feed Mills • Sprinklers

In Other Fields, Chrysler Powers Locomotives • Motor Coaches • Air Conditioning Equipment • Pulp Machines • Drilling Equipment • Fire Pumps • Snow Plows • Street Flushers • Saw Mill Equipment • Oil Well Pumps and Drillers



Chrysler Industrial 15—one of eight basic models

More manufacturers, more operators of industrial equipment are discovering the brilliant efficiency of Chrysler Industrial Engines on scores of different applications.

For Chrysler Industrial Engines are built *solely for industrial jobs.* Furthermore, Chrysler Industrial Engines are designed and engineered to meet the *specific working requirements* of each type of equipment they power. They can also be adapted to special regional operating conditions.

A letter of inquiry will bring an engineer well qualified to discuss your particular application. Address: *Industrial Engine Division, Chrysler Corporation, Detroit 31, Michigan.*

CHRYSLER

HORSEPOWER WITH A PEDIGREE

". . . The trend is to make engines less sensitive to fuels . . ."

DIESEL FUEL starts on p. 90

to 60% more miles per gallon than gasoline. It would take a very big price increase to offset that advantage.

The trend toward higher-compression engines, though, is cutting that mileage differential. In fact, it's conceivable that before very long there will be practically no difference between a gasoline engine and a diesel—either in performance or design. Charles F. Kettering has predicted that gasoline engine compression ratios will get so high that you'll be able to burn diesel fuel in them; all you'll have to do is install fuel injection equipment.

• **Quality Will Drop**—In the effort to get more yield out of a barrel of crude, there is bound to be some drop in quality of diesel fuel. Petroleum Administration for Defense warns that a major military crisis would bring this about quickly.

Lower fuel quality will show up a lower cetane rating for the fuel (cetane is to diesel fuel what octane is to gasoline). A big drop in cetane will make for difficult starting in cold weather, smoky burning, and engine roughness. It dictates a higher maintenance bill.

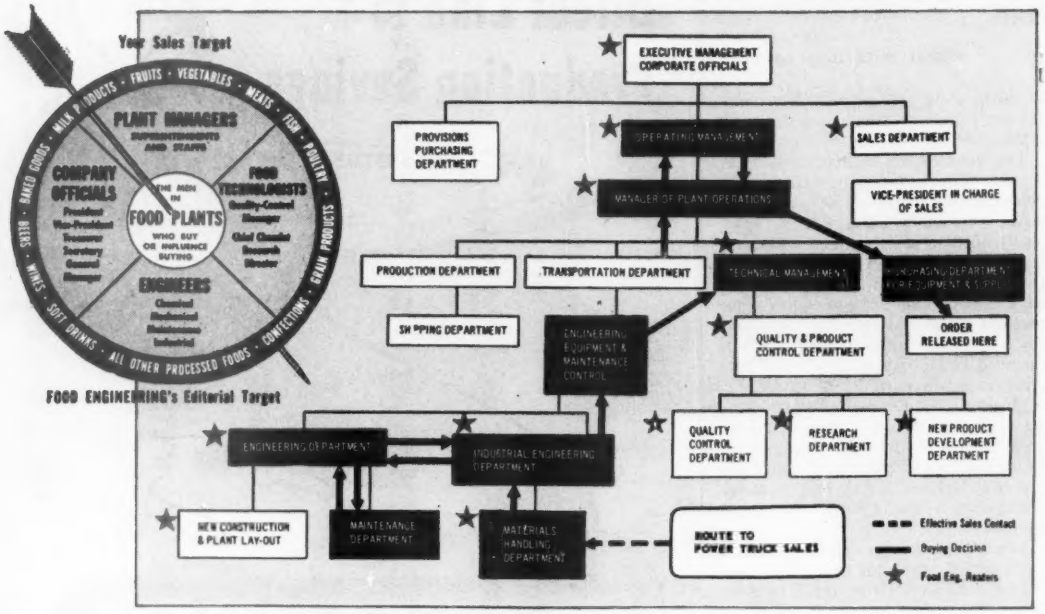
First to be affected by a lowered cetane rating would be the Navy and the railroads. Both specify fuels with fairly high cetane ratings. That's why the Navy is taking a keen interest in the new diesel fuel additive for boosting the cetane rating that Ethyl Corp. is researching (BW—Mar.24'51,p111). The additive, amyl nitrate, is effective but expensive. It might add as much as 0.6¢ a gal. to the present cost of about 10¢ a gal.

In the long run, though, lower cetane ratings for diesel fuel may not be a handicap. The trend in diesel engine design is to make the engines less sensitive to fuels, to build them so that they will burn lower-quality fuels.

• **Solution to Sulfur**—Less sensitive diesels will not compensate for higher sulfur content in fuels, however. That's a problem that has been getting increasingly difficult lately. Sulfur in fuels produces greater engine wear and deposit formation. A few crudes yield low-sulfur-content diesel fuels, but most are not so obliging.

It's possible to process this sulfur out of the fuel, but prohibitively expensive. So diesel operators will have to turn to improved lubricating oils to compensate. By adding a high proportion of detergents to lubricating oil, you can neutralize the damaging effects of sulfur.

Follow This Route to Sales in Food Plants



While this meat packing plant organization-chart shows *who buys or influences the buying* of electric trucks, it is also typical of the *route-to-sales* for any kind of major equipment. In any food-plant organization, functions or titles like these are likely to represent the people behind the scenes who select or reject your products. Some of them your salesmen call on . . . many others they never see.

***Note the FOOD ENGINEERING readers among this influential group. They are interested in products like yours if you can help them do their food-processing job better. Tell them what your product can do for them in your FOOD ENGINEERING advertising . . . help open their doors to your salesmen.**

Your Sales Target

In your Sales Target pictured above are the men in food plants who buy or influence buying.

Food processing is big business running to a sales volume of some $33 billion a year, and the men in the nation's food plants plan to spend almost a billion dollars this year for modernization (60%) and plant expansion (40%).

The men in your food-plant Sales Target are in all branches of this gigantic industry. The main branches are baking, meat, fish, poultry, fruits and vegetables, milk products, confectionery, soft drinks, wines, malt liquors, coffee, tea, spices, sugar, salt, shortening, extracts, and a hundred others covering all processed foods.

Food Plants Must Modernize

Many food plants face the demand for increased production to meet military and world needs.

All food plants are being squeezed by rising costs of materials and labor and a growing scarcity of workers.

Every possible efficiency attainable through food-plant engineering must be applied. Quality must be maintained to meet competition. Costs must be lowered to survive.

You Can Sell Many Branches of the Food Industry

The plants in your Sales Target find many applications for the same types of equipment, materials, and ingredients.

Equipment for *mixing, grinding, separating,* and *cooking* have common applications. No industry uses more motors to drive *refrigerating* equipment. All *material* must be *handled* mechanically wherever possible in the plant and out. *Instruments* along the production line must insure uniformity of product and must accurately control continuous processing. All plants must strive for the utmost in sanitation. All products must go on *packaging* lines especially engineered for them.

Food Engineering Serves the Men in Your Sales Target

FOOD ENGINEERING Editorial Target is identical to your Sales Target.

The editorial assistance that FOOD ENGINEERING gives its industry attracts and holds as readers the men in your Sales Target who you must reach and sell. Follow this proven route-to-sales in food plants with your equally helpful advertising in FOOD ENGINEERING.

SALES TARGETS is a bi-weekly service bulletin reporting new food plant construction, modernization and changes in personnel in food plants. Here, is news on this vast market that provides sales clues for you. We will send Sales Targets, free, to your salesmen. Send in your lists.

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FOOD ENGINEERING

PRODUCTION BRIEFS

Dyeing fibrous glass by a process that gives it wash fastness and abrasion resistance is a joint development of General Aniline & Film Corp., General Dyestuff Corp., and Owens-Corning Fiberglas Corp. The glass fiber is first cleaned by a heat treatment, then dyed with a mixture of pigments and resin binders.

•

Forgings for defense (BW–Feb.10'51, p77) are the reason Packard Motor Car Co. will quadruple its forge operations with a $2-million expansion.

•

A better memory is built into its electronic calculators by International Business Machines–under a license from National Research Development Corp., London, England–by using a cathode ray tube for storing information. The information appears as dots and dashes on the screen of the tube, which is fed to the computer in a few millionths of a second.

•

A guided missile plant of Consolidated Vultee Aircraft Corp. (BW–Mar.17'51, p20) will start going up in August at Pomona, Calif., should be ready for mass production in one year. The Navy will pick up the tab for $40-million.

•

Research in heat exchangers at the University of Delaware has received financial aid from 57 oil companies through the American Petroleum Institute. The companies think that the results might increase efficiency of fluids in refineries.

•

Machine tools in storage at the Air Force's Marietta (Ga.) and Omaha (Neb.) depots are being loaned out to qualified contractors on a pick-it-yourself basis.

•

To finish airplane surfaces, Douglas Aircraft Corp. uses a hot-spray application that does the job in one coat, saves 10 gal. of finish per plane over present methods. The idea was worked out by Hercules Powder Co., which also makes the nitrocellulose for the lacquer.

•

Bearings packaged in metal cans will withstand corrosion by moisture and salt water atmosphere, believes the Timken Roller Bearing Co. Canned bearings probably can be stored under the worst conditions for up to 10 years without deterioration.

•

Finer tolerances in carbonization hardening of gears have been achieved by Brad Foote Gear Works, Inc. The company's heat-treatment process limits distortion to 0.001 in. per foot of diameter.

NEW PRODUCTS

Mailing by Machine

Preparation for mass mailing and packaging is a piecemeal business that ordinarily requires numerous machines and workers. Volks Machines, Inc., builds a compact machine, called EnMail, that it says will collate, envelope, imprint, stamp, and address or label 50 to 100 mailing pieces a minute. It needs only one operator.

EnMail consists of two basic units, plus optional attachments. A roll or sheet feeder supplies the envelope paper to the first section. This unit prints identifying data such as the dealer imprint, and the postal markings, and can address the envelope (optional equipment). Then it die-cuts the shape of the envelope. There are two possible feeders for the second section: One handles pamphlets and flat pieces such as magazines; the other collates several items for enveloping in one enclosure. This section applies adhesive to the envelope, folds and seals it around the mailing piece, and can apply a preprinted label. Postage stamping requires optional equipment. Finally, EnMail carts the packets away on a conveyor, ready for mailing.

The 12½-ft. x 2½-ft. machine comes in two models that handle different envelope sizes. Besides the direct mailing field, Volks recommends EnMail for packaging any flat objects, such as hairnets.

• *Source: Volks Machines, Inc., 70 Wall St., New York City.*

• *Price: About $20,000, or $650 per month rental for a 12-month period.*

Attacks Dirt Two Ways

Air-jet equipment puts plant maintenance men on the offensive in the struggle with dust and scrap particles, says Patterson Products. The company has a pneumatic machine, called Vibro-Pneumatic Industrial Cleaner, that carries out a two-pronged attack: Pulsating blasts of air cut dirt loose, so

Production up from 80 to 300 pieces per hour with a Warner & Swasey 5-Spindle Automatic

IN 1940 Badger Meter Manufacturing Company of Milwaukee worked three shifts to turn out their required production. Today they are able to achieve the same output with one shift, using the same floor space for production.

Practically all of these results are due to more efficient machine tools.

For instance, when Badger installed a Warner & Swasey 5-Spindle Automatic Chucking Machine, they had one main purpose in mind—to step up production. It did just that. Output on the standard register housing, used on all Badger meters for liquids, rose from 80 to 300 pieces per hour! In addition, better surfaces and closer tolerances were attained.

Badger, like many a manufacturer who is hard pressed for production during these critical days, has found the Warner & Swasey 5-Spindle Automatic an answer to a prayer. For in addition to improving work quality and stepping up production, it does this with fewer operators.

If these facts hit home, call in your nearest Warner & Swasey Field Representative. He'll be glad to help you boost your man-hour output.

WARNER & SWASEY
Cleveland

YOU CAN PRODUCE IT BETTER, FASTER, FOR LESS WITH WARNER & SWASEY MACHINE TOOLS, TEXTILE MACHINERY, CONSTRUCTION MACHINERY

pulsating vacuum pressure can pick it up.

The unit resembles a bag-type vacuum cleaner—only you carry the bag on your back. Unlike a vacuum cleaner, though, there's an air-pressure line that runs from the air source (80 psi. or over) to the rod handle. At the rod handle, it splits into two separate lines, each of which is controlled by a finger-tip button on the handle.

Press one button, and pulsed jets of air blast stubborn dirt in hard-to-reach places. When you press the other button, pulsed air is blasted into the second line, then follows a return path. Air shoots down to the rod head, turns, and goes into a constricted chamber that has an opening into the rod nozzle. This creates powerful suction pressure in the nozzle that picks up loose matter. Compressed air is pulsed at 2,000 intermittent blasts a minute.

• *Source: Patterson Products, 518 Maccabees Bldg., Detroit 2, Mich.*

NEW PRODUCTS BRIEFS

Synthetic filter cloths of Orlon, Vinyon, and Dynel have been added to the nylon line developed by Filtration Engineers, Inc., 155 Oraton St., Newark, N. J. (BW—Nov.27'48,p62). The cloths, called Feon Fabrics, are for all types of pressure and vacuum filters, centrifuges, and dry filtration equipment.

•

A long-lived cutting tool made by Gorham Tool Co., 14,400 Woodrow Wilson Ave., Detroit, has an alloy core that can take hundreds of clean-up grinds. The core material, designated M-40-U, is said to last up to 10 times longer than ordinary cutting steel without redressing.

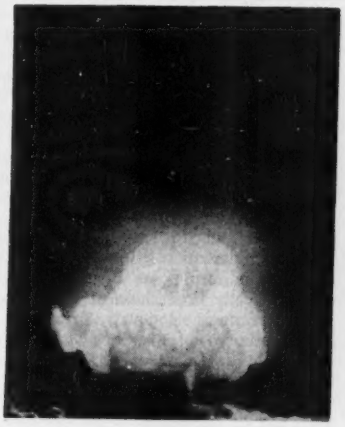
•

Fiberglas shields to protect pipelines in rough terrain are available from Owens-Corning Fiberglas Corp., Toledo, Ohio. The prefabricated cushioning material is made with bitumen, reportedly won't sag, crack, or disintegrate. You wrap a roll or sheet around the pipe, secure it with pressure-sensitive tape or metal strap.

•

An anticorrosive, Corrosanti, comes in four grades to handle varying metal protection problems: Grade A removes boiler scale deposits when injected through the boiler feed line; Grade B is for all metals that are exposed to water, especially out of doors; Grade C protects metal surfaces from acid, highly corrosive vapors; and Corrosanti Special is for ferrous surfaces subjected to high temperatures. It's from Research Laboratories of Dr. Schror, Inc., Newark, N. J.

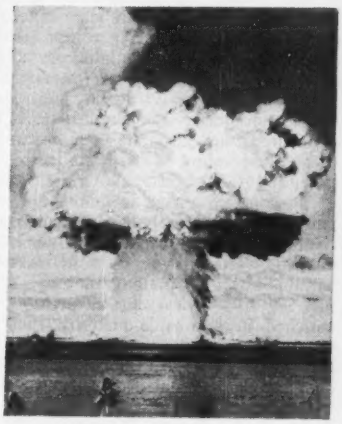
ATOMIC ENERGY, 1945-1951



1945 World's first atomic explosion, Alamagordo, N. M.

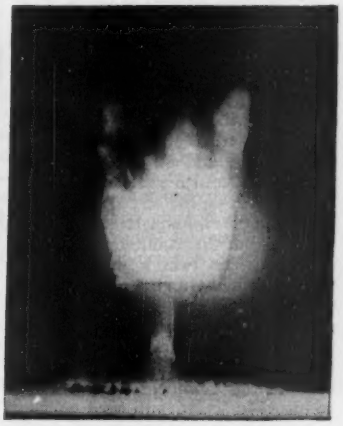
1945 Second blast destroyed a city—Hiroshima.

1945 Third blast, at Nagasaki, ended a war.



1946 Bikini's circused-up tests proved bomb was no fluke.

1948 At Eniwetok, AEC tested a far more powerful bomb.



1951 And Nevada tests may have involved a smaller one.

BUSINESS WEEK REPORTS TO EXECUTIVES ON:

1951—The Payoff Year

IN ATOMIC ENERGY, 1951 is the first of the payoff years. After Hiroshima and Nagasaki came nearly five years of promises, projects, hopes—but few results. Now the results show.

Each year since 1947, BUSINESS WEEK has supplemented its regular news coverage of atomic energy by stepping back for a long look at the whole picture as it changed from year to year. Annual roundups have reported to executives the slow buildup of a peacetime civilian organization, the decision to expand the wartime munitions plant, the beginnings of development work on atomic engines, the intensifying pressure for more and bigger weapons as the U. S. lost its monopoly of nuclear armament. But always, talk of real results had to be in the future tense.

This year is different. This time BUSINESS WEEK can report that:

• Output of atomic bombs has been rising rapidly for about 18 months, has probably already doubled the postwar rate (previously estimated by BW at about 50 bombs a year—Apr.30'49,p67), will continue to grow fast for at least four more years.

• A new and more businesslike

team has taken over the management of the atomic energy program, is running it with a minimum of controversy and lost motion.

• Production of useful power from atomic fuels has rather suddenly become an immediate issue instead of something to worry about in the 1960's.

I. Bombs: More and Better

THE BUILDUP of America's atomic armament is at least a year ahead of the general rearmament program—even though atomic plants take longer to build than factories.

That's because the atomic buildup got started back in 1947-48, at a time when we were still cutting back our regular military forces. Then, a year before Korea, came the detection of a Russian atomic explosion. That pushed U.S. atomic activity onto an emergency basis. When actual fighting started in Korea and we began to increase our conventional armament, the atom bosses had only to project on into the future an expansion already well under way.

No coherent account of the development of America's postwar atom program has ever been issued officially; there have been only cryptic announcements of new contracts and plant locations, fragmentary and guarded references in speeches. There can be no entirely exact account under present secrecy rules, and BUSINESS WEEK has sought no access to secret information. But by collating the official statements, by talking to working-level atom officials around the country, by putting some twos and twos together, and by a certain amount of guesswork, BUSINESS WEEK has arrived at what is probably a reasonably good approximation of the true facts. AEC officials have examined the account for security violations, but they have no comment to make on its accuracy—in accord with their policy of not discussing speculative articles by persons not having access to restricted data.

Even with these reservations it is a story well worth telling—not just because, in the perspective of six years, it's an encouraging story; but also because it's an essential element in sound public judgment on U.S. policy.

FOR ABOUT TWO AND A HALF years after Hiroshima, atomic energy work stagnated. It had to wait first for Congress to beat out a policy, then for the new Atomic Energy Commission to try to rebuild the shattered Manhattan District organization.

The one accomplishment was to keep the wartime plants going.

At Hanford, output of plutonium sagged as the three only-half-understood reactors there deteriorated in use.

At Oak Ridge, the isotope-separation equipment, despite its novel features, was more conventional. Tuning up the enormous gaseous-diffusion works produced normal increases in output and efficiency; by early 1947 it seemed safe to shut down the expensive and inefficient electromagnetic plant.

First—More Plutonium

1947 WAS the turning point. That was when General Electric rehabilitated the Hanford reactors, restoring them to wartime capacity. By the end of the year, AEC was ready to launch a $500-million plant-expansion program.

The expansion centered on the Hanford plutonium works, which at that time seemed to have the more promising process. After some juggling around, it added up to construction of two additional reactors to transmute heavy uranium into plutonium, plus substitution of a new and more efficient chemical plant to extract the plutonium.

Work on the two reactors went ahead smoothly. The new chemical plant was a tougher proposition—a novel process and one peculiarly difficult to scale up from laboratory to plant size. Engineering went slowly; construction started later than planned and will not be finished for several months yet.

A SHARP upturn in the output of plutonium came in the spring of 1950. It resulted only partly from completion of a new reactor; with three years' operating experience behind them, General Electric technicians were able markedly to improve their handling of the reactors, increasing output and lowering costs. Typical improvements: faster procedures for charging uranium slugs into the unit and getting plutonium-loaded slugs out; careful scheduling of maintenance so it can be done at times when the reactors are shut down anyway for charging.

All this—expansion plus increased efficiency—would have come to a peak late this year with an output of plutonium perhaps three times Hanford's original capacity. But just as the results were beginning to show, fighting broke out in Korea.

AEC'S RESPONSE to Korea was another round of expansion. Influencing the form this expansion took was the President's directive, early in 1950, to develop a superbomb that would get its energy from the fusion of hydrogen atoms into helium. Tritium (extra-heavy hydrogen), the explosive that probably will have to be used in the H-bomb, is manufactured from lithium in reactors of the same sort that make plutonium.

So the biggest feature of AEC's post-Korea expansion is a dual-purpose plant—able to make either plutonium or tritium. It is being built at Savannah River, S. C., will eventually cost close to $1-billion.

Du Pont is designing and building the plant, as it did the original Hanford Works, and will operate it when it is finished—probably in 1954.

DESIGN of the three Savannah River reactors is still being worked out, but indications are that they will differ radically from those at Hanford. Nowadays most designers favor the heavy-water type of machine. This gives a flexible and convenient piece of equipment. In a huge shielded tank of heavy water, a lattice of natural-uranium slugs can be suspended to manufacture plutonium. The heavy water serves doubly—it replaces carbon as a moderator, slowing the neutrons emitted by splitting atoms; and the same water can be circulated through a heat exchanger to dissipate the hundreds of thousands of kilowatts of energy.

Mechanically, this design has a double advantage. For one thing, it eliminates the elaborate equipment needed at Hanford to purify, circulate, store, and discharge cooling water.

A second advantage is that the arrangement of the fuel elements can be changed without rebuilding the whole machine. Thus if you want to make tritium instead of plutonium, you can fuel the reactor with slugs of uranium enriched in fissionable material, then you insert as much metallic lithium as the reactor can take without choking off the chain reaction.

During the war, when Hanford was designed, Manhattan District people considered using heavy water; but the material was then too scarce, and they used blocks of carbon instead. Now a good supply of heavy water is available from a plant in Canada, and AEC is planning additional plant capacity.

It's almost certain the Savannah River reactors will be kept cool—below the boiling point of water. This will mean that, as at Hanford, the million or so kilowatts of power produced will be thrown away uselessly in a cooling system.

It would have been nice to use the power, but the need is for weapons quick, and AEC doesn't want to get involved now in the engineering problems of running at high temperature.

Expansion's Other Side

Right from the start in 1945, the gaseous diffusion process for separating fissionable light uranium, U235, from

the far more plentiful U238 was unbelievably successful.

The process is simple in principle. In practice, it's a terribly complicated deal; you have to maintain delicate balances of pressures, temperatures, flow quantities, etc. But from the start the huge plant worked well, developing few bugs. Year by year, the Carbide & Carbon people who operate it have improved the process—achieving moderate increases in output and really startling savings in operating costs.

They have made the controls more and more automatic until today the plant, like a modern refinery, is very nearly a piece of robot apparatus, maintaining its own balances, adjusting automatically to changes in throughput. The work force has been reduced to a maintenance crew and a mere handful of operating people—in total about a third the force that originally ran it.

DESPITE this success, the Oak Ridge plant seemed to the atom administrators, for the first few postwar years, like a sort of lucky freak that would never need to be repeated. Manufacture of plutonium in nuclear reactors looked like the more promising approach, and AEC concentrated its 1947 expansion plans entirely in this direction.

What changed this view, apparently, was the 1948 Eniwetok Proving Ground test of new and more powerful bomb designs. It seems to have demonstrated a continuing need for U235 as well as for plutonium. At any rate, a few months after the tests, AEC announced a $60-million expansion at Oak Ridge.

A year later, when the Russians startled the world by exploding a bomb of their own, AEC's first response was a further and larger ($160-million) addition to Oak Ridge.

The first expansion was completed early this year; the second is scheduled to go into operation this coming winter. Together, it appears, they will about double the output of Oak Ridge.

KOREA was the next big bump. At the same time that it decided on a new Hanford at Savannah River, AEC put in the works a second Oak Ridge at Paducah. Work on the project started last December. The plant will cost about $500-million, will have a capacity about equal to the expanded Oak Ridge works, will probably start operating in the winter of 1952-53. Carbide, which runs Oak Ridge, will also operate Paducah.

Double and Redouble and . . .

TAKE A QUICK look at the whole story, and you see something like this:

First come two years of getting organized.

Then AEC starts a relatively leisurely expansion—at Hanford in 1947, at Oak Ridge in 1948.

The Russians explode a bomb in 1949; AEC speeds up the Hanford expansion, speeds and enlarges its program at Oak Ridge.

In 1950 fighting breaks out in Korea; AEC starts two huge new plants.

Through 1950 and 1951, the 1947-48 expansions are completed; output begins to rise steeply. By now it has probably doubled.

Over the next two years, as the 1949 expansion and the Paducah plant start producing U235, output will rise as steeply.

In another year, it will rise still further as Savanah River comes in.

All Kinds of A-Bombs

ONLY THE PEOPLE who make them and specially cleared military men have ever seen an atomic bomb or read its specifications. But from the few facts that have been released, you get the impression that

How the Competition Is Doing

RUSSIAN progress on atom bombs remains the big mystery. Despite the best efforts of U. S. and British intelligence, security behind the iron curtain is pretty impregnable. The best information still seems to be obtained by monitoring radioactivity in the atmosphere. But some additional light comes from reports from satellite countries, data on uranium mining in East Germany, and Russian orders for technical equipment placed in such countries as Sweden, Switzerland, and Czechoslovakia.

As far as BUSINESS WEEK can learn, the information from such sources adds up about like this:

• The Russians made and detonated their first bomb in the summer of 1949.

• They have exploded no bomb since. This indicates that they are still manufacturing their original model. This is almost certainly as good as our Hiroshima model, since they had access, through Fuchs, and others, to the work on this model. It is possible, of course, that they made improvements of their own paralleling those we adopted in 1948.

• The Russians are operating one plutonium plant somewhat smaller than Hanford. It is not known if they have solved the operating difficulties that nearly stopped Hanford in 1946-47.

• They are building, and may possibly have finished, a gaseous diffusion plant of the Oak Ridge type.

• On the same basis on which BUSINESS WEEK in previous reports has estimated production of the U. S. war-built plants at about 50 bombs a year, these facts would indicate a Russian output of 10 to 20 bombs a year, a stockpile of 20 to 40 bombs.

IN EXPANDING production, Moscow will run into one serious problem that is no obstacle to the U. S.: an adequate uranium supply. The Russians are working their Bohemian uranium mines with an urgency (ores are transported by air) that suggests that this field is their chief reliance. They are not known to have any other source of uranium except a little in Russian Turkestan.

If this is the case, it's good news. For not only are the Bohemian mines strategically vulnerable; they produce ores of a quality the AEC wouldn't be bothered with. The U. S. regards its Colorado plateau deposits as decidedly marginal in quality; but back before the first world war Colorado was able to price the Bohemian mines out of the world radium market—until both were shut down by discovery of the fantastically rich Belgian Congo ores.

The Congo deposits are the U. S.' chief source. Domestic production in Colorado and the other mining states has now come up to second place, though a distant second. Close behind is the supply imported from Canada.

Besides this, recent technical developments promise a significant additional supply as a by-product of Florida phosphate and South African gold mining.

the 1945 bomb was a rather clumsy and inefficient piece of mechanism. Along with the drive to expand production, AEC has had a major job to do in improving the bomb itself. In the main, this work has been done by the University of California at AEC's Los Alamos Scientific Laboratory in New Mexico and, more recently, by Western Electric at the Sandia Laboratory.

The most urgent job was to boost the efficiency of the explosion. The scientists did that in about a year's intensive work in 1947 and 1948. A new design of bomb was successfully tested at Eniwetok Atoll in the summer of 1948. Reportedly it developed something like 50% efficiency, releasing energy equivalent to about 100,000 tons of TNT.

It seems safe to assume that production since that time has been concentrated on the improved model; possibly some of the old models have been converted.

Obviously that doesn't leave much room for further radical increases in efficiency of explosion, but there are plenty of other ways the bomb can be improved. The frequency of tests this year—at the Nevada proving ground in the early spring and later at Eniwetok—suggests that a lot of work is being done. So does the very establishment of the Nevada test area, since its purpose is to permit frequent test explosions without the expense and lost time of an expedition to the Pacific.

ONE NATURAL line of improvement is to cut the weight of the firing mechanism. The Hiroshima bomb, it was said at the time, could safely be carried in nothing smaller than a B-29 superfortress.

If the stream of hints emerging from the Pentagon can be believed, the weight of the bomb-firing mechanism has now been reduced enough so that at moderate ranges the bomb could be dropped by fast fighter-bombers, which are harder for an enemy to intercept than are heavy bombers. And it could probably be fired from an oversize artillery mortar—if suitable targets could be found within a range of 20 or 30 miles.

More important, it might be possible to use an atomic warhead in V-2 type rockets with present ranges of around 200 miles. Neither mortar shells nor V-2s can be intercepted by any present defense.

THE VERY NATURE of an atomic explosion, it would seem, sets limits to this kind of thing. The chain reaction begins in a spherical lump of fissionable material whenever the lump exceeds a certain "critical mass."

A bomb is fired by bringing two subcritical masses together suddenly. The smallest possible bomb would be one containing just the critical mass of explosive.

Unless a way could be found to bring more than two masses together at precisely the same instant, it would seem that no bomb could contain so much as twice the critical mass of fissionable material.

But it seems as if something might be done in the range between a little less than one critical mass and a little more than two. Local observers at the Nevada tests reported that the explosions appeared to be of different sizes, which may mean they were aimed at this problem.

Toward the Superbomb

ONE WAY of getting around the upper limit on the size of an A-bomb might be to make a hydrogen bomb.

The principle is simple: If hydrogen atoms are heated to a temperature of millions of degrees they fuse together into atoms of helium—and give off a lot of energy as they do so. An A-bomb can produce the required temperatures, so if you pack a lot of liquid hydrogen around an A-bomb, you might get a lot of extra power. There's no critical mass involved and no obvious upper limit on how much hydrogen.

In practice it's a lot rougher. Ordinary hydrogen won't work. Heavy hydrogen (deuterium) is scarcer, but—in atom bomb terms—fairly easy to obtain. But it probably won't work either. Super-heavy hydrogen (tritium) might work, but it hardly occurs at all in nature, has to be manufactured artificially.

A LOT OF RESEARCH, including some preliminary investigations at this year's Eniwetok explosions, has been done since the end of 1949—when Truman overruled AEC and its Scientific Advisory Board and ordered an H-bomb. But so far no answers have been obtained to the two basic questions:

Can it be done?

Is it worth doing?

No firm answer to the first question will be possible until the Savannah River plant is finished and has run long enough to make a bomb-size supply of tritium. That might be about 1955.

The second question is still open. So far as the nonsecret facts are concerned, it doesn't look like a very good deal. By the textbook figures:

- You have to use tritium.
- You have to make tritium by splitting lithium in the same sort of nuclear reactor that makes plutonium—and if it makes tritium it doesn't make plutonium.
- The tritium a reactor makes in any given time would have only about one-sixth of the energy content of the plutonium it could have made in the same time.
- The effectiveness of a bomb does not increase so fast as its power. (Mathematically, the area of destruction varies as the square of the cube root of the energy.)
- Tritium deteriorates with time; half of it decays every 12 years. Plutonium is practically permanent.

Put all this together, and you come up with the conclusion that if you build an H-bomb 10 times as powerful as an A-bomb you are expending about 60 times the effort to do about 4½ times the damage.

DETAILED investigation might make this conclusion look different. It might turn out that part or all of the charge could be deuterium instead of tritium. Or tritium might prove unexpectedly easy to make, or explode with unexpected efficiency.

So far, 18 months of research have demonstrated that a lot of the textbook figures are wrong. Some of the changes make the thing look better; some make it look worse. Philosophically, the AEC technical people have adopted the view that the thing is worth trying because, if it should turn out to be a paying proposition, we'd better know it ahead of anyone else. And many, naturally, have become fascinated by the sheer technical charm of the problem.

Meanwhile, no major resource except most of the time of the Los Alamos Laboratory has been irrevocably committed to the H-bomb. Although the Savannah River reactors are usually referred to as an H-bomb plant, they can just as easily be used to make plutonium.

The Secret Weapon

THERE'S ONE other atomic device about which no more than hints are ever heard. That's radiological warfare—the deliberate use of radioactive materials as a weapon.

Though too slow in their action to be used like poison gas, they could effectively bar troops from entering a contaminated area, workmen from repairing or using a contaminated plant. By selecting isotopes with suitable rates of decay, the length of the period of contamination could be determined in advance.

A wide selection of radioactive materials is available in the Hanford waste products, and others could be manufactured in reactors.

It is known that work is being done on this subject, but BUSINESS WEEK has been unable to learn its extent or success.

Chairman Gordon E. Dean

General manager M. W. Boyer

Commissioner T. Keith Glennan

Commissioner Henry DeWolf Smyth

Commissioner Sumner T. Pike

Commissioner Thomas E. Murray

II. The Bomb Builders

THERE SEEMS to be some law of political science that every new government agency has to be started off by a sacrifice team. Someone has to get the thing running, make the inevitable mistakes, bear the brunt of controversy and political bitterness. By the time the outfit is a going concern, its first leaders are a liability to it, crippled reminders of finished battles.

At that point a new crowd has to put the thing on the rails and substitute competence for excitement.

You can measure the maturity of the Atomic Energy Commission by this: The fresh team has taken over, has its hands firmly on the controls.

LILIENTHAL and his colleagues on the original commission have solid accomplishments to their credit. All the increased bomb production so far, most of the increases coming over the next 12 months are the direct outgrowth of decisions the first commission made, of work it set going. It will be late in 1952 before the post-Lilienthal programs start to pay off.

There's a less ponderable but equally significant legacy from the Lilienthal crew: the kind of organization they built. That was the big job to be done at the time when AEC took over the remnants of the Manhattan District.

Quickest results might well have come from a flashy, taut-ship military setup. But Lilienthal—quite consciously—plumped for a gradual approach, for a more flexible, more characteristically American organization. The outfit he left has an easy personal competence and informal chains of command, local initiative, and adaptability. Those characteristics are typical of most of this country's hotshot organizations, public or private—the Bureau of Reclamation, say, or General Motors Corp.

That approach, probably, is a major reason AEC has been able to rise to a series of new demands that first tripled its schedules, then doubled that—to rise to the demands without crash-program hysteria or serious subordination of long-term aims.

THOSE ARE major accomplishments to chalk up in favor of a sophisticated, intellectual kind of leadership. But by the time Lilienthal left, most observers were more conscious of the fact that the very qualities of such a leadership can also make it timid, indecisive, and doctrinaire.

Congress has always felt for Lilienthal the special distrust it reserves, sometimes justifiably, for intellectuals in government. Right at the start, hearings on his confirmation as chairman of AEC turned into a merciless going-over. Lilienthal never got his nerve back; the result was a tendency to dodge controversial questions, to spread responsibility.

This timidity showed up at its worst when there were decisions to make. It was not at all unusual when AEC sweated for 14 months over the politically complicated selection of a site for the Arco Reactor Proving Ground. There was, of course, more than fear to AEC's slow decisions; another factor was a sort of buck fever over the stupendous significance of atomic energy. "When we have a decision to make," one working-level official complained to BUSINESS WEEK a few years ago, "we act as if the decision had to stand for 50 years."

Toward the end of his regime, Lilienthal developed an almost sulky bitterness over his failure to find significant nonmilitary applications for atomic energy. He had visualized himself as a Prometheus bringing a new kind of

fire to mankind and couldn't reconcile himself to being a mere munitions maker.

The Second Regime

BUSINESSLIKE is the word for the present atomic management. The new people—the commission itself, the general manager and his staff, the top officials—are alert, intelligent men; but they are definitely not philosophers. They are practical operators to whom manufacturing is an engrossing job.

Gordon Dean is a practicing lawyer with enough working knowledge of politics not to let it get in his hair. He has taught law, was for a long time on the legal staff of the U.S. Dept. of Justice. He practiced law as a partner of Sen. McMahon, author of the Atomic Energy Act and Dean's sponsor for the chairmanship.

Second key man is the general manager. M. W. Boyer is a cheerful, friendly Irishman who dearly loves a good shirtsleeves argument with a colleague. He went to work for Esso Standard as a research chemist back in 1927, quit last November as vice-president and director. His subordinates admire the way he teams his skill at human relations with the technical grasp of his deputy, Walt Williams, who has been one of the anonymous pillars of atomic work ever since Gen. Groves' day.

OF THE OTHER four members of the commission, three are businessmen, two of them with an engineering background. T. Keith Glennan is a handsome, aggressive engineer with a curiously mixed business history as an executive of Western Electric, Paramount Pictures, Goldwyn Studios, and Ansco. For three years before his appointment he was president of Case Institute of Technology.

Thomas E. Murray, a New York City electrical manufacturer and holder of some 200 patents, has been a director of Chrysler Corp. and several banks and a trustee of the United Mine Workers welfare fund; he is a leading Catholic layman. A somewhat stiff individualist, Murray often finds himself on the minority side of commission decisions.

Sumner Pike, the one member who has stayed with the commission since the beginning, is a humane and charming empiricist who conceals a penetrating mind under a bumbling manner. He made a moderate fortune promoting and financing mining enterprises, retired, and went into government as a member of the Securities & Exchange Commission.

It has already become an unwritten rule that one member of AEC be a professional scientist. Henry deWolf Smyth (author of the famous Smyth Report) fills that spot. But even he fits the new pattern; for many years he has been an administrative scientist—as chairman of the Princeton physics department and with the Manhattan District.

THROUGHOUT the organization these men head, the atmosphere, the way of thinking and operating, is less like a government agency than like a large, enlightened, and smartly run business concern. Which—very nearly—is just what it is.

There's no doubt about the size of the atomic setup. Owning about $2.5-billion worth of plant and equipment, AEC is the second-largest manufacturing organization in the country, topped only by U.S. Steel. Its operating budget runs to $400-million a year.

And in a very real sense, atomic energy is a nongovernmental affair. Leave aside the matter of legal title to plant, and it's about as private as, say, the aircraft industry or any other industry whose main customer is government.

Of the 90,000 people who build and run AEC's factories and laboratories, only about one in 20 draws a government paycheck. The rest show up on the payrolls of the firms that operate the atom industry—such firms as Union Carbide & Carbon (Oak Ridge and Paducah), General Electric (Hanford), du Pont (Savannah River), Western Electric (Sandia Laboratory), Monsanto (Mound Laboratory), Westinghouse and Phillips Petroleum and American Cyanamid (Arco reactor station), National Lead (the new Fernald feed materials center).

This business of payrolls is more than a bookkeeper's quibble. At General Electric's Hanford Works, for instance, the fundamental decisions on plant expansion and the like are made in Washington—but day by day an executive or workman gets his pay, vacations, or promotions and deals with his bosses or underlings on policies made in Schenectady.

A YEAR AGO, during the leaderless hiatus between the old and new commissions, BUSINESS WEEK looked over the sturdy and competent working organization, which was then running on momentum, concluded: "It is balanced between two courses. It might emerge as one of the little group of hotshot outfits that have found the way to be big and nimble at once; or it might sink into a high-grade bureaucracy."

It's early to tell, but today it looks as if Gordon Dean's group has turned the trick—as if his crew, for all its size, can turn around on a dime.

Consider, for instance, the history of the Paducah U235 plant:

- The middle of last August—six weeks after Korea—AEC's manager at Oak Ridge flew to Washington with an outline plan in his pocket.
- Two weeks later he had AEC clearance to run a request through the Budget Bureau to Congress.
- At that point he asked the National Security Resources Board to recommend sites where the plant could get some 800,000 kw. of electricity. NSRB offered eight nominations.
- Other factors—availability of government land, labor supply, housing—narrowed the list to three choices. Of the three, the U.S. Engineers said it could most easily spare the public land at Paducah; NSRB had no preference.
- Paducah was selected in mid-October. That the site fell in Vice-President Barkley's home territory may be coincidence or may indicate a savvy awareness of political boobytraps.
- The project was officially announced on Dec. 15. By that time contractors had been selected and initial orders placed for equipment.

Public or private, few organizations could make a $500-million decision any faster than that.

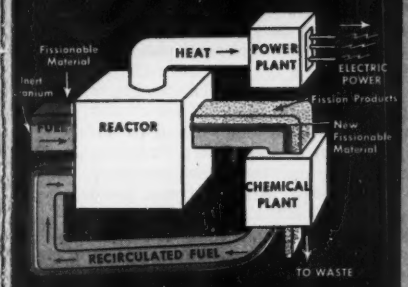
BUSINESS-STYLE organization offers great strengths for a government body with the peculiar sort of job AEC has. But along with them go the limitations of a business concern.

Knowledgeable criticism of today's AEC would shoot at: (1) lack of interest in the social questions arising from its work, (2) lack of attention to long range planning. Clearly ahead are some basic policy issues on atomic energy; by present indications any very fundamental thinking that's being done on them is being done outside AEC—which, perhaps, is as it should be.

ONE SUCH issue is the ultimate scale of bomb production. Until now it has been possible to proceed on the simple basis that if one is good two is better. But someone is soon going to have to decide such things as:

- How big a share of national resources should go into atom bombs? AEC dollars may not bulk large in a $60-billion defense program, but they are spent in very sensitive areas: When its new plants are built, AEC will be the nation's largest single consumer of electricity; plutonium plants compete directly for rare materials with the critical jet-engine program; U235 plants use the same sort of equipment as refineries and chemical works.
- How many atom bombs is it worth having, anyway? The day may already be in sight when there'll be more bombs than worth-while targets. Is there a limit on the number of bombs you'd dare fire—either for fear of what they might do to the atmosphere or what they might do to civilization?

Three Approaches to ATOMIC POWER

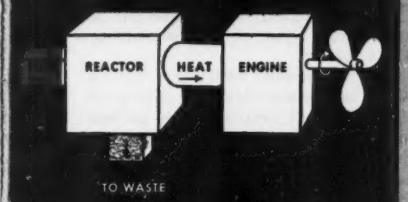


Self-Contained Power Breeder

- fueled with natural uranium.
- consumes fissionable portion (U235).
- produces heat to make electricity.
- at same time turns part of non-fissionable uranium into fissionable plutonium.
- recirculates used fuel and repeats process.

Not economic at present

Technical progress over next decade may reduce costs to a level competitive with electric power from burning of coal or oil.



Propulsion Engine for Submarine or Airplane

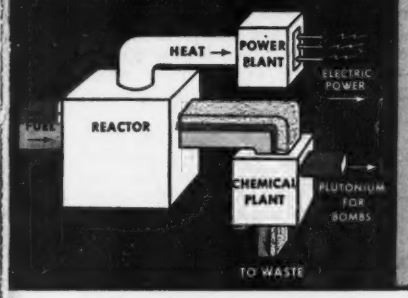
- uses enriched fuel.
- consumes fuel to make heat.
- heat operates steam or gas turbine engine to drive vehicle.

Wasteful of money and fuel

But worth while because of military value of great range for submarine or airplane.

One is under construction for completion about 1953.

Two others are being designed.



Byproduct Power from Bomb Plant

- reactor consumes natural uranium to make plutonium for bombs.
- it is operated hotter than present plutonium plants.
- heat is used to operate an electric generating plant.

Probably economic now

Plutonium is going to be produced anyway for military use.

Extra costs of high temperature and generating equipment are moderate. Power at competitive rates can probably amortize these.

Utility and chemical companies are studying economics of this system.

III. Power Comes Into the Foreground

ANOTHER issue coming rapidly nearer is what to do about electric power generated by atomic reactors.

THIS IS the payoff year for atomic energy in more than one sense. Not only is it the year in which the long postwar process of planning and development is showing tangible results; it also seems to be the year in which industry generally decided that atomic energy is here to stay.

As recently as a year ago you had to look hard and long to find serious interest among businessmen in atomic matters. To most of them, this was something for the military, the scientists, and the government to worry about. More than once, AEC people have had to beat on desks and make patriotic appeals in order to find companies willing to take on projects for it.

Today you can see signs of a rush to get into the field before the ground floor gets too crowded. Many companies are coming to AEC asking for assignments, and it needs only a hint of government receptiveness to bring in more. For the first time, businesses are spending a little of their own money to get a toehold in the area, and several are thinking about large investments.

You can trace several reasons for this rather sudden shift:

• The atom program is now getting so big as to involve nearly every technical business at some point.

• Rightly or wrongly, many industrialists felt that the old Lilienthal commission was unsympathetic to business; contractors and other businessmen are finding the new group easy to deal with.

• Within the past year—and this is perhaps the biggest reason of all—useful power from nuclear fission has begun to look like something for the near future.

EMERGENCE of electric power as an early possibility is a sharp reversal. It's true that back in 1946 observers were talking about atomic powerplants in five years, but since then power has seemed to move further and further away as research uncovered fresh difficulties. Even a year ago, it looked like something for the 1960s. But in the last 12 months two things have changed the picture: a shift

in economic viewpoint; and technical developments, coming out of jet engine work, in the application of new metals —titanium and zirconium.

PREVIOUS THINKING was almost all in terms of a strictly commercial setup. Some sort of reactor would receive uranium fuel. It would "burn" the U235 that makes up 1 part in 140 of natural uranium, producing usable power. As it did so, the burning of the U235 would simultaneously transmute an equivalent amount of inert U238 into fissionable plutonium. A chemical plant would clean the fission-product "ash" out of the fuel and return it to the reactor. The plutonium would burn, producing energy —and more plutonium.

Any day now, perhaps before this is published, scientists from the Argonne National Laboratory will throw the starting switches on a little machine designed to do something approximating this on an experimental scale. This is the Experimental Breeder Reactor at the Arco Proving Ground in Idaho. EBR has cost $2-million—very cheap as reactors go—and its primary job is to show that a properly designed reactor can produce an amount of plutonium at least equivalent to the U235 it consumes. At the same time it will run hot enough to make steam to drive a generator of something over 100 kw.

Despite this demonstration of technical feasibility, the economics are still all against any powerplant on this system.

True, the costs involved are of a sort that can almost certainly be brought down by a lot of research and development work. Quite likely they can be brought down enough to be competitive. But that's a decade or more away.

Byproduct Power

THERE'S A QUITE different way of looking at the power question. That's to focus your attention on the energy you produce unavoidably whenever you manufacture plutonium.

Right now the Hanford Plutonium Works produces energy at a rate that is probably well over 1-million kw. The energy is used to warm the Columbia River—an operation that makes no great contribution to the economy of the Northwest. The power shows up as heat inside the reactors.

To get rid of the heat, enormous quantities of cold water are flushed through the piles—enough of it to carry away all the heat without raising the water to the boiling point.

To get any use out of the energy, the engineers would have to let the piles get hot, let them rise to several hundred or 1,000 deg. F. Coolant coming out of the piles at such high temperatures could run engines that would generate electricity.

THE FIRST ROUND of development on big reactors was the work of the Manhattan District. Power was nothing but a cooling problem, and they considered themselves lucky that they were able to build units that would run at all.

The two reactors installed at Hanford after the war followed the same design, with improvements in detail.

Meanwhile, development began after the war on a second round of plutonium-producing reactors. Much of the best of this work went into the very advanced heavy-water reactor at Chalk River, Canada. This in turn became, in effect, a pilot plant for the first real postwar units—the production reactors du Pont is now building at Savannah River.

Atomic energy officials gave serious thought last fall to having the Savannah River reactors designed for a temperature high enough to make their energy output usable. The deciding factor against this was time: the designers figured it would take them an extra 18 months to solve the structural and mechanical problems of steam-engine temperatures.

On that basis, AEC programmed itself into the odd situation it will be in a year or so from now: with one hand producing and throwing away several million kilowatts of energy, with the other hand draining the country's power grid of several million kilowatts of electricity.

Even at that, the thing was touch and go. If the designers had had available last year the work the Air Force's jet engine people have done this year on the high temperature metals, titanium and zirconium, they could probably have reduced the predicted time lag nearer to six months—which might have swung the decision the other way.

THE NEXT round of production reactors, there's little doubt, will run hot enough to produce electricity. And that changes the whole economics of atomic power. It works like this:

Suppose you are going to build a low-temperature reactor to produce plutonium for bombs. And suppose, to take some arbitrary figures, that for $50-million you can build a unit that will produce half a pound of plutonium a day. Your cooling system will have to dispose of energy running into the hundreds of thousands of kilowatts.

If you redesign your reactor to produce steam for a generating plant, it might turn out to cost, say, $10-million more. Now $60-million for a boiler (with chemical plant and generating equipment still to buy) is pretty steep. But since you were going to build a plutonium plant anyway, you could reasonably decide to charge to power only the extra $10-million; plutonium would carry $50-million of the reactor cost—plus fuel costs plus operating costs.

Result: steam at a capital investment of something like $40 a kilowatt and no fuel cost—and that's cheap power.

Looked at one way, you'd be letting military appropriations subsidize cheap power. Looked at another way, you'd be rigging things so that the atom bomb program would be making a contribution to the civilian economy instead of being a total drain on it. Either way, you'd be getting a chance to experiment with atomic powerplants a decade ahead of time.

RIGHT NOW, AEC technicians have roughed out designs for at least three types of plutonium-plus-power reactors.

One would start with the Savannah River heavy-water design. One great virtue of any such machine is that the heavy-water moderator in which the fuel slugs are immersed can also be circulated through a heat exchanger to dissipate the heat. Conversion to power production would necessitate two major changes (plus a lot of minor but troublesome ones): rearranging the heat exchanger and pumps to let the temperature go higher; beefing up the whole structure so the heavy water could be kept under enough pressure to prevent it from boiling.

A second design with an even more attractive simplicity is the so-called homogeneous reactor. For this, the uranium fuel is dissolved in the heavy water. The reactor is nothing but a tank containing the reacting "soup." Not only can the soup be circulated through a heat exchanger, it can be circulated continuously through a chemical plant to remove the fission products and plutonium. Here again, the tank would have to be under great pressure.

The third approach is not so appealingly simple but might be easier to work, particularly at very high temperatures. This would resemble the EBR at Arco: solid fuel, carbon moderator, heat removed by circulating molten sodium or a similar metal through the reactor and through a heat exchanger. This would eliminate the problem of containing high pressures. Both Argonne Laboratory and General Electric's Knolls Atomic Power Laboratory have done a lot of work on molten-metal heat transfer.

Industry Moves In

ONE OF THE first to realize the trend things are taking was Charles Thomas, the new president of Mon-

santo Chemical. He had been an atom man himself in Manhattan District days. His company had operated the Oak Ridge National Laboratory for a short time after the war and still operates the Mound Laboratory at Dayton.

Last year Thomas began talking about the possibility that Monsanto might build a dual-purpose reactor with $50-million to $100-million of its own money. It would sell plutonium to AEC, use the power in chemical electroprocess work (thus concealing, if not bypassing, the political questions involved in direct sale of power). Finally, he teamed up with his local utility, Union Electric of St. Louis, and made a formal proposition to AEC: Let him have some of his people cleared for secret information; let them have the use of AEC design data to work out a definite plan.

THAT—as Thomas doubtless intended—forced AEC to do some hard thinking about power. It didn't take the commission many weeks to come to three definite conclusions:

- From the point of view of reactor engineering, high temperature was, indeed, next on the docket.
- They certainly didn't want to give Monsanto a special inside track.
- There clearly were a lot of technical questions to be answered that called for a power man's insight rather than a reactor technician's.

One such question: Which of the proposed reactor designs offers operating characteristics that would fit most easily into the normal workings of a utility system? Perhaps one of the dozens of sketch-designs lying around AEC will look more promising than any of the three.

How big a block of power, turning off and on all at once, could a utility handle?

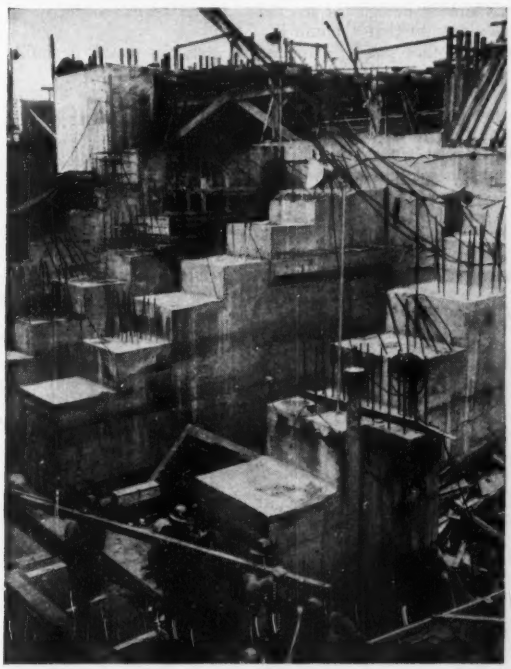
And there was the question of the best temperature to run at. It would be possible of course to adopt arbitrarily the 1,000 deg. F or thereabouts of modern steam plants. But that might not be best. One of the peculiar characteristics of an atomic engine is that it will go up to just as high a temperature as you let it. (In fact, there's talk of building an experimental reactor to operate at the highest temperatures that can be handled with today's materials.) What could a power engineer do with steam at, say, 2,000 deg. F?

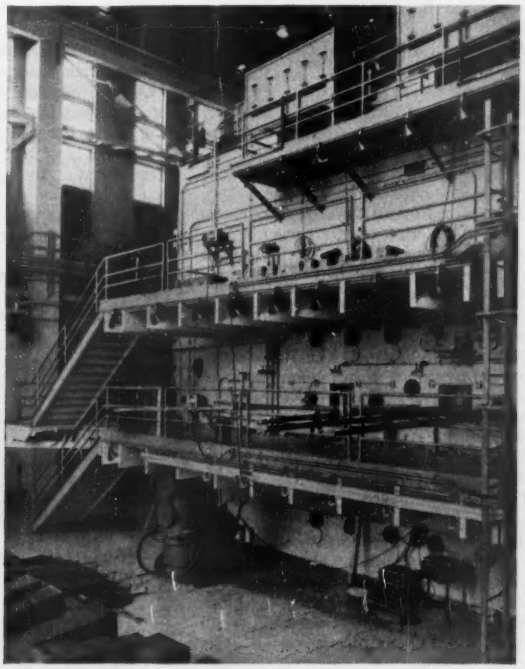
Going at it the other way—it would doubtless be cheaper to build a reactor to run at something like 400 deg. F than at higher temperatures. It's been a generation since engineers have thought about temperatures like that, since you get so many more watts out of a pound of coal at high temperatures. But if a kilowatt's worth of steam turned out to be cheaper at 400 deg.—what then? As one engineer remarked, you'd have to go down to the graveyard and dig out the oldtimers to find anyone who knew how to design low-pressure equipment.

AFTER AEC had mulled over questions like these for a while, it made a public announcement: It was prepared to let a limited number of companies send 15 people or so each into the atom laboratories, learn what was going on, make suggestions, and—if they choose—come up with a proposal for a private reactor. AEC made no commitments as to what its attitude toward any such proposals would be.

It took no more than that to bring Detroit Edison running. Its president, James Parker, is one of the tiny group of utility men who have been fascinated from the first by the power potentials of atomic energy. He has served on innumerable liaison and advisory committees with AEC, was only waiting for such a chance. He promptly teamed up with Dow Chemical and made a deal with AEC.

Some of the AEC people wanted representation from the West Coast; a quiet word to Bechtel Corp. took care of that. Bechtel was just finishing building AEC's EBR reactor at Arco,





BIGGEST atomic furnace of which details can be pictured is research reactor at Brookhaven Laboratory on Long Island. Foundations (left) and working face (right) look impressive, are small stuff alongside production units.

prides itself on being on top of new developments in chemical and power-plant engineering and construction. As a West Coast engineering firm, Bechtel has a long and close business relationship with Pacific Gas & Electric Co., one of its major clients.

PG&E, for its part, has an obvious interest in any new power source. The West Coast seems always to be outrunning its ever-growing power supply. Most of the good hydroelectric sites are already being exploited. PG&E's steam plants burn oil, but the supply of nearby oil is shaky enough so that the newer plants are designed for easy conversion to coal. And coal itself is hard to come by in that territory—from Utah, maybe, or by sea from the East Coast.

So Bechtel and PG&E formed the third group.

Finally, a bit of informal negotiation by working-level AEC people produced a Chicago team—Commonwealth Edison and the Public Service Co. of Northern Illinois.

At that point AEC closed the books. Bendix Aviation Corp. brought in a proposal too late to be considered, settled for a project to investigate the possibilities of a private reactor to produce radioactive material. A number of other companies have been nosing around, and AEC could almost certainly have a dozen more study projects going any time it wanted to pass the word that the door was open.

Politics and Economics

CLEARLY, the Atomic Energy Commissioners are taking a narrowly technical view of the whole power possibility. But equally clearly, it inescapably raises a host of political and economic questions—all of them controversial. For instance:

• The price of the power. You can set up the books to get plutonium at about present costs (or maybe higher) and make power very cheap; or you can sell power at what the traffic will bear and get a saving on plutonium. Since AEC will be dealing in blocks of power comparable to the big federal dams, the difference can be crucial to whole regions. AEC is inclined to settle for today's plutonium cost—but won't have the final word; the military, Congress, the Federal Power Commission, state regulatory agencies, local groups, and congressional delegations all will have their say.

• Location of the plants. Supply of technical people and of uranium will limit the number that can be built. With power shortages impending all over the country, there could be a merry scramble.

• Public vs. private power. Ever since the Flood Control Act of 1936, Congress has been pretty firmly committed to the principle of public handling of power produced at federal projects. Public power crusaders aren't going to sit quiet while private utility companies take over power that's a by-product of the atom bomb.

IF AEC IS ignoring questions like these, the utilities quite obviously don't intend to. They've been through this same thing before—when flood control became a major federal objective along with byproduct power at a cost that could be figured dirt cheap.

You can find utility men who wish now it had occurred to them back in the early thirties to go into the flood control business on a fee basis rather than let the flood controllers into the power business.

AEC's present talk of getting utility people into the plutonium business may not prove to be the ground floor; Congress, not AEC, is going to make the policy. But if there is a ground floor, a lot of utility men clearly want to be on it.

Planes and Ships

A FALLACY everyone commits in gauging any new thing is to start lining it up competitively with what's already around. Actually, radical new materials, tools, or fuels rarely get adopted because they can do more cheaply something that's already being done; it's the things they can do that just couldn't be done before that put them over.

Oil, for instance, was a preferred fuel for house-heating and auto propulsion long before it could compete with coal. Aluminum got its early market where people would pay a premium for light weight, not by underpricing copper. Diesel engines were powering submarines years before they turned out to be the cheapest way to drive a locomotive.

The same thing goes for atomic power. The most novel thing about it is that fissionable material, packing 10-million kwh. into a pound, is a practically weightless fuel. It can make it possible, for the first time, for moving vehicles to cruise almost indefinitely, ignoring refueling bases.

Some day commercial ship operators may find it worth-while to pay a substantial premium for that characteristic. Right today the military figures that it's worth just about whatever it costs.

THAT'S WHY the first atomic device to produce power in real quantities is going to be the Westinghouse submarine engine prototype now under construction at the Arco proving ground. STR Mark I, as it's officially designated, is due for completion late next year or early in 1953. The very similar STR Mark II, which will actually be installed in a submarine, is staged close behind it and may well be finished not much more than a year later.

STR is designed with little regard for economy, either of money or uranium. An engine of 25,000 or so horsepower that costs $25-million is not cheap. And a reactor that uses conventional structural materials, ordinary water for heat transfer, enriched fuel, and produces no plutonium is wasteful of uranium—in the same sense that a bomb is.

But the point is that it can be built and built now.

Much further in the future is a General Electric submarine engine. On this one, the designers are taking their time, using sophisticated nuclear design, the new metals, molten-metal heat transfer.

THE ATOMIC airplane engine is out of the doghouse it occupied when it was an Air Force-Fairchild baby. Now, with the blessing of AEC, the Navy, and the Joint Chiefs of Staff, it is officially on the construction schedule. General Electric is doing the engineering at its Lockland jet engine plant, and a plane is being designed to carry it—by Boeing one report says, as a modification of the enormous Howard Hughes flying boat according to another.

Aircraft weight restrictions make impossible the rough and ready design of the STR. It will probably more closely resemble the GE naval engine. That would imply greatly enriched fuels and a molten-metal heat transfer system. Beyond the heat exchanger there could conceivably be a steam engine driving propellers, but it would be more in line with current aeronautical thinking to heat air and drive a gas turbine.

"70% of Our 146-Store Grocery Trade is Rural"

In 13 years the average sales volume of Victory Stores has more than trebled—largely, says Victory management, "because we have been giving supermarket service in small space to country communities." Typical is Victory Store at Sidney, N. Y., population 3,022. (37.8% of all supermarkets in the nation are in places of less than 25,000 population.)

"To bring to country people the same wide range of quality food items available in large cities, has been the aim of Victory Stores," says Charles A. Smith, Jr., Executive Vice-President.

"Our stores are in hamlets as small as 125 people. All of our 146 stores except one are in towns of less than 10,000. Instead of driving in to larger towns and cities, our customers spend over $12 million a year with us . . . because we carry over 2,000 branded grocery items, besides the choicest of fresh produce and meats.

"Not only do we advertise in 27 small newspapers but by mailings to Central New York State farm people—up to 80,000 Star Route and RFD names. The national brands that sell best for us are usually those that are advertised, as well, to our customers in leading farm magazines like Country Gentleman."

One out of every 3 retail dollars is spent by Rural America. Is enough of your advertising reaching rural families with sales-making power—directly *in their rural magazines?*

Country Gentleman is *read* more, *used* more, *liked* more by 2,300,000 prosperous families throughout Rural America, proved by a recent nationwide survey. That is why it is 1st among farm magazines—12th among *all* magazines—in advertising revenue.

▲ Food-O-Mat in Sidney store accommodates $8,000 worth of canned and packaged groceries—saving valuable space. Nearly all stores carry frozen foods. Out-of-season fresh produce, and top-quality fresh meats are also popular Victory features.

◀ Like many Victory Stores, Sidney store has complete baby department with not only baby foods but also bottles, nipples, baby powder, oil, cotton, etc. A large percentage of stores also carry a wide assortment of toiletries and drugs, to help supply most of everyday shopping needs of customers.

Taxes, Costs Drag Down Profits Despite

Earnings Boxscore: Second Quarter, 1951

(all figures in thousands of dollars)	SALES			FEDERAL TAXES		NET EARNINGS		
	1951	1950	Percent Change	1951	1950	1951	1950	Percent Change
Admiral Corp.	$33,266	$57,004	−41.6%	—	$2,923	$1,690	$4,327	−60.9%
Allegheny Ludlum Steel	58,749	40,737	+44.2	$5,397	—	2,924	2,300	+27.1
Anchor Hocking Glass	—	—		1,858	1,084	1,222	1,536	−20.4
Atlantic Refining	—	—		—	—	9,132	8,952	+ 2.0
Avco Mfg. Corp.	72,579	60,304	+20.4	1,525	2,875	1,956	3,667	−46.7
Barker Bros. Corp.	7,118	6,936	+ 2.6	76	129	96	200	−52.0
Bates Mfg. Co.	13,917	12,455	+11.7	—	—	709	625	+13.4
Beatrice Foods	54,719	47,995	+14.0	818	770	554	732	−24.3
Catterpillar Tractor	113,809	83,070	+37.0	—	—	4,947	8,904	−44.4
Clark Equipment	31,624	15,520	+103.8	2,595	776	1,598	1,265	+26.3
Container Corp.	59,243	34,068	+73.9	6,839	1,687	4,192	2,331	+79.8
Continental Steel	10,737	9,478	+13.5	1,193	765	570	705	−19.1
Detroit Michigan Stove	2,920	2,794	+ 4.3	—	—	D51	89	—
Devoe & Raynolds	13,750	12,093	+13.7	744	388	563	632	−10.9
Diamond Alkalai	19,982	14,945	+33.7	—	—	1,937	1,408	+37.6
Eagle-Picher Co.	21,502	14,458	+48.7	—	—	904	628	+43.9
Eaton Mfg. Co.	49,816	39,398	+26.4	4,932	3,164	3,052	4,012	−23.9
Emsco Derrick & Equipment	5,366	2,965	+81.0	—	—	234	200	+17.0
Federal-Mogul Corp.	9,331	6,015	+55.1	1,324	476	792	739	+ 7.2
Ferro Corp.	10,124	8,116	+24.7	625	—	673	628	+ 7.2
General Electric	615,047	462,601	+33.0	70,000	32,000	35,329	40,587	−13.0
Johns-Manville	62,678	48,975	+28.0	8,629	2,778	6,300	6,172	+ 2.1
Lehigh Portland Cement	15,841	13,178	+20.2	2,890	1,345	1,687	2,072	−18.6
Libbey-Owens-Ford Glass	14,407	14,049	+ 2.5	9,259	6,195	5,148	7,854	−34.5
Liggett & Myers Tobacco	134,796	131,409	+ 2.6	—	—	5,876	7,101	−17.3
Mead Corp.	26,253	19,971	+31.5	—	—	1,496	1,333	+12.2
Minneapolis-Honeywell	31,652	24,458	+29.4	—	1,980	2,254	3,043	−25.9
Monsanto Chemical	71,806	53,521	+34.2	—	4,834	6,482	7,276	−10.9
Moore-Handley Hardware	8,655	7,458	+16.0	168	117	186	182	+ 2.2
Mullins Mfg. Co.	14,632	13,023	+12.4	1,735	1,139	902	1,190	−24.2
Murray Corp.	41,228	33,238	+24.0	4,520	1,604	2,750	2,655	+ 3.6
National Tea	83,120	69,782	+19.1	730	830	867	1,188	−27.0
New York Air Brake	7,660	3,663	+109.1	1,041	228	607	346	+75.4
Pennsylvania Salt Mfg. Co.	12,758	10,423	+22.4	—	—	1,185	1,124	+ 5.4
Pittsburgh Coke & Chemical	13,783	8,841	+55.9	2,054	420	1,053	962	+ 9.5
Pitts. Consolidation Coal	47,399	47,732	− 0.7	2,469	2,929	2,845	4,177	−31.9
Pittsburgh Screw & Bolt	—	—		1,691	353	721	530	+36.0
Remington Rand	53,012	34,209	+55.0	5,922	1,594	4,051	1,901	+113.1
Reo Motors	31,180	8,331	+274.3	1,786	—	1,085	340	+219.1
Riegle Textile Corp.	18,336	13,365	+37.2	1,011	681	927	804	+15.3
Robbins & Myers	5,379	4,086	+56.1	660	142	374	260	+43.9
Rohm & Haas	29,397	20,038	+46.7	4,494	1,327	2,021	1,947	+ 3.8
St. Regis Paper	52,365	36,285	+44.3	—	—	4,389	2,196	+99.9
Seeger Refrigerator	28,248	26,865	+ 5.1	—	1,673	1,328	2,288	−42.0
Sharp & Dohme	10,689	9,939	+ 7.5	543	663	1,012	1,372	−26.2
Standard Railway Equipment	10,150	4,707	+115.6	1,652	432	1,029	626	+64.4
Thor Corp.	5,310	5,850	− 9.2	—	—	25	121	−79.3
Wayne Pump	3,037	2,380	+27.6	—	—	24	114	−78.9
Wesson Oil & Snowdrift Co.	43,336	44,088	− 1.7	1,475	2,108	1,371	2,859	−52.0
Worthington Pump & Machinery	—	—		1,963	881	1,459	1,438	+ 1.5

Soaring Sales

Second-quarter reports show lagging earnings for five out of every 11 corporations covered by survey.

Corporate sales continued their post-war zoom right through the second quarter. But profits fell off the apple cart.

That's the conclusion of a BUSINESS WEEK survey based on well over 100 early bird second-quarter reports (table, page 110). The survey shows that for every six corporations whose 1951 April-June net earnings topped the 1950 period there were five others that fell behind.

I. Taxes Deal the Blow

Much of this mixed performance obviously can be blamed on higher operating costs. Sagging prices in many lines have probably cut down the inventory appreciation that for a long time has been making corporate profits swell unduly. But neither of these factors is the real villain of the piece.

That deadening role is reserved for taxes. With normal income taxes already higher than in 1950 and with the new excess profits levy, the Treasury seemed set to take a really hefty dip into the second-quarter till. In fact, it often took more than it left for the corporation.

Thus General Electric figured its April-June tax bill would hit $70-million, its earnings a modest $41-million. Elastic Stop Nut Corp. thinks the federal cut will come to $502,000, two-and-a-half times estimated net earnings. Rohm & Hass puts the tax bill at around $4.5-million, against earnings of $2-million.

Prospects for third-quarter earnings look like more of the same, only worse. Comparisons will be with a rising base from now on. Profits are expected to lag progressively behind the post-Korea levels when everybody and his brother scrambled for goods and materials whether they needed them or not.

II. Some Did Well

The adverse factors did not hit all trades equally in the second quarter. The chemical group generally topped its 1950 showings; so did most oil, paper, and rail equipment companies.

In the chemical field, many leaders

overshot their 1950 marks from 5% up to 20% and 37%. Among the oil companies, Superior Oil of Cal. parlayed a $3.4-million (26%) sales gain into a profits rise of $2.1-million, or 127%. Socony-Vacuum Oil Co. earned about $39-million, compared with 1950's $23-million.

The paper industry also basked in sunshine. St. Regis Paper's earnings nearly doubled, powered by a 44% rise in sales. Container Corp. profits jumped about 80%.

The rail equipment business did equally well. Many units in the field had second-quarter sales more than double those of slow-moving 1950. Profit boosts of 60% to 75% were frequent, despite all adverse tax and cost factors.

III. And Some Did Not

Even in the prosperous industries, not all companies followed the upswing. Among the chemicals, du Pont and Monsanto lagged.

Du Pont, according to a preliminary, undetailed first-half report, had second-quarter profits of only $1.24 a share on its common stock compared with $1.44 in 1950. And the drop in earnings from its own operating revenues may have been larger than these figures show. Here's why:

Du Pont derives income from two sources: its own operations, and a huge block of General Motors stock. Both sources are lumped in the second-quarter figures.

However, first-half figures are broken down. In January-June, 1951, the corporation earned $1.68 a share from its own operations, compared with $1.96 the year before. (This was despite a 32%, or $189-million, boost in sales.) In 1951 GM contributed 82¢ a share, bringing total profits to $2.50. In 1950 GM contributed only 63¢, yet du Pont's net profit was $2.59.

Monsanto Chemical was in the same boat with du Pont. Second-quarter sales were up $18.3-million over 1950, but profits sagged 11%, or $800,000. For once, taxes weren't responsible here; higher costs did the job. Monsanto actually estimated its tax liability at only $4.8-million, compared with a $6.5-million guess the year before.

IV. No Word From Detroit

Up to midweek none of the representative auto companies had reported on the second quarter. But it seems unlikely that they have reversed the unfavorable earnings trends of the first quarter. In January-March, GM had shown a 33% drop in earnings, despite a 19% rise in sales. Chrysler didn't even do that well.

The auto parts trade hasn't shown

any individual performances so poor as GM and Chrysler. But the trend is downward.

Mullins Mfg. Co. showed a 24% drop in second-quarter earnings, with sales up 12%. The gap is blamed on a $600,000 federal tax boost. Murray Corp.'s 24% rise in sales was reflected in a less than 4% profits hike. Federal taxes again get the blame: an estimated $4.5-million against only $1.1-million in 1950. As for Eaton Mfg. Co., a $1.8-million tax rise bit about $1-million off profits, though sales were up $10.4-million.

V. Building Supplies Spotty

The building supply trades made a rather mixed showing. Most of the cement companies that reported had earnings way below 1950. Devoe & Raynolds, a paint leader, was off 10%.

On the other hand, Johns-Manville Co. managed to push its profits up about 2%—$128,000—despite an expected federal tax bill that rocketed from $2.8-million in 1950 to over $8.6-million. The big factor in turning the trick was a sales hike from $49-million to $63-million.

The larger steel companies have yet to issue second-quarter reports. Those of the smaller units already at hand give a mixed picture. Few Wall Streeters believe that the leaders will show any spectacular reversal of the earnings downtrend that began in the first quarter.

FINANCE BRIEFS

Investment bankers say they won't bid on the $50-million Oregon veterans bonus bond issue, according to state officials. The market has already turned down a similar issue by West Virginia, at the request of the voluntary credit restraint committee (BW—Jun.2'51, p121).

•

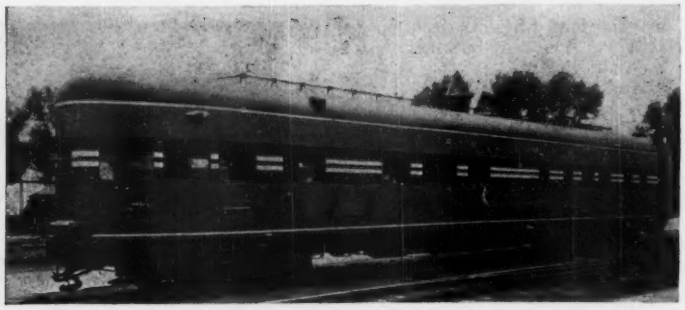
Long Island R.R. will have to pay $4-million or more to settle claims arising from its two disastrous 1950 wrecks, says trustee William H. Draper, Jr. Another $2-million in claims was covered by insurance.

•

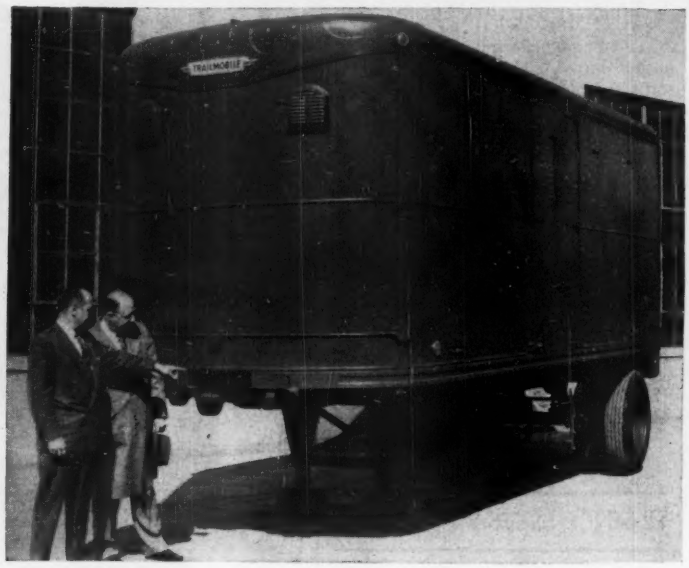
Too many money orders (BW—Jun.30 '51,p96) are being folded or otherwise damaged, says the Federal Reserve Bank of New York. The Fed says 10,000 of the 250,000 punchcard postal orders it handles daily are mutilated. That makes them impossible to handle by machine.

•

Otis & Co. closed down temporarily its two New York State offices to avoid "petty harassments" from Kaiser-Frazer Corp. (BW—Jul.21'51,p104).



SLEEPING CAR SERVICE was out for Pullman, so it turned to . . .



TRUCK TRAILERS. Purchase of Trailmobile uses idle dollars, means . . .

New Line for New Earnings

Pullman's newest acquisition will help rebuild income cut off by the sale of its sleepers and put another notch in its diversification program.

Ever since Pullman Inc. sold its sleeping car business to the railroads six years ago, its management has wrestled with a problem: how to put to work the money it got for the sale.

The directors agreed, basically, that most of the cash should be

• (1) Invested to replace the earnings formerly brought in by sleeping car operations, or

• Used to reduce the capital stock of Pullman Inc. "to a better relation to the earning potential" of the company.

• **Big Deal**—Actually, Pullman has followed through on both counts. So far the greatest outlay has been for stock reduction; 1,037,897 shares, costing $49.8-million, were bought and retired from 1947 through 1950, a 32% cut in capital stock.

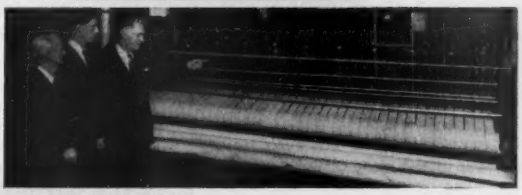
Last week Pullman gave stockholders details of the biggest deal yet to rebuild the company's earning power: purchase, for approximately $41.5-million, of the assets of Trailmobile Co., Cincinnati, the nation's second-largest builder of highway truck trailers.

• **Healthy Addition**—In adding Trailmobile to its manufacturing subsidiaries, Pullman got itself a going concern: 1950 sales were $52-million, net

A Housewife's Nightmare

Is All In A Day's Work For Laundries Like These . . .

ADELMAN LAUNDRY
Milwaukee, Wisconsin



BEST GRAND LAUNDRY
Indianapolis, Indiana

CHRIST HOSPITAL LAUNDRY
Cincinnati, Ohio

THE MOUNTAINS of ironing that haunt the dreams of harassed housewives are daily routine in modern commercial, hotel, hospital, and institutional laundries.

Ironing flat work by the ton *does* present laundry executives with problems. There is the problem of keeping costs under control. And the problem of doing the job right without "re-runs." REVOLITE Roll Covers help provide the right answers.

Quality ironing once meant slow, costly hand ironing. Then came the huge flat-work ironing machines—but with old-fashioned canvas rolls that wore out in a week or ten days under the constant beating of heat, steam and pressure. Today, REVOLITE Roll Covers (asbestos coated with a special resin) often last as long as a year—turning out the finest of flat work by the mile.

Because REVOLITE saves shut-downs for cover changes, it makes manpower and machines more productive. And that makes it a boon to the cost-conscious commercial or institutional laundry.

Atlas contributions to the laundry industry are typical of how Atlas serves many industries. If *your* production efforts are in the range of Atlas activities, let our technical and engineering staffs help with your problems.

REVOLITE
Reg. U. S. Pat. Off.

For Revolite, Address Atlas Powder Company, Stamford, Connecticut

ATLAS POWDER COMPANY
WILMINGTON 99, DELAWARE
Offices in Principal Cities

Industrial Explosives • Industrial Finishes • Laundry Covers • Acids
Activated Carbons • Hexahydric Alcohols • Surface Active Agents

COMMON DIVIDEND

The Board of Directors has declared a quarterly dividend of seventy-five cents (75¢) per share on the Common Stock, payable August 15, 1951 to stockholders of record at the close of business July 27, 1951.

R. L. LINGELBACH
Secretary

July 16, 1951

was $3.3-million. First-half 1951 sales ran above last year's levels, but higher taxes will reduce the net, Pullman told its stockholders.

Along with Trailmobile's physical properties Pullman got another asset—the talented young management team running Trailmobile. It consists of George M. Bunker, 43, president; William A. Burns, Jr., 39, vice-president and general sales manager; and J. B. Wharton, Jr., 37, vice-president and treasurer.

• **Why Sell?**—Why then did Trailmobile—a prospering concern with sound management—sell? Simply because it needed more working capital to handle its growing business. As Bunker told Trailmobile stockholders: "In view of the difficulties involved in obtaining necessary capital funds upon acceptable terms, the company's unsatisfactory excess profits tax base, and other factors, . . . the directors believe that the sale . . . is in the best interest of common stockholders."

And Trailmobile's stockholders readily backed up their president. The vote was 81% in favor of the sale.

Pullman's reasons for buying are just as basic. They follow the tenet laid down by Pullman's president, Champ Carry: "Our problem is to employ dollars."

• **The Long Road**—But the purchase does more than mark another step in Pullman's long search for suitable methods to put to work more of the company's available liquid assets. It also carries forward an industrial diversification program that started even before Pullman sold its sleeping car business.

Back in 1944 Pullman bought for cash the M. W. Kellogg & Co., petroleum and chemical engineering concern (BW—Sep.27'47,p41). The deal gave Kellogg new resources, provided Pullman with a substantial source of income in an expanding field apart from railroad car building or sleeping car operation. It also brought into the Pullman management a number of younger executives.

But all did not run smoothly. The Kellogg purchase was still in the air when an unexpected blow fell. Pullman was held to be in violation of federal antitrust laws, was ordered to get rid of either the sleeping car business or its freight and passenger car manufacturing operations (BW—May13'44,p26). Pullman chose to sell its sleepers (BW—Nov.17'45,p20).

• **No Price Tag**—Just how much Pullman will net for its sleeping car business is still a question, mainly because of taxes. A total of $106-million was turned over to Pullman Inc. in the liquidation of Pullman Co., the sleeping car subsidiary. Of this amount, $65.8-million came in the form of liquidating dividends, paid in cash and securities. Another $40.2-million in cash was received from the group of railroads that took over the sleeping car business in 1947.

Disbursements from the $106-million include the $49.8-million spent for Pullman's own stock, $4.7-million for group life insurance on retired Pullman Co. employees, and $11.7-million set aside as a tax reserve. The remaining $39.8-million is now included in consolidated working capital.

Pullman may get back some of that $11.7-million tax reserve. Just how much depends on the outcome of unsettled tax matters. More than that, the sleeping car subsidiary itself set aside an additional $3.3-million for the same purpose; and there is a further deposit of $1-million remaining in an escrow account to satisfy possible claims arising out of the sale of Pullman Co.

That makes $16-million set aside. Whatever is left over after all matters are settled will go to Pullman Inc.

• **Ready to Buy**—Back in 1948 Pullman considered using some of its available cash to buy an interest in North American Rayon Corp. and American Bemberg Corp., which the Alien Property Custodian had put up for sale. But the directors decided this move was too radical, that rayon manufacture is too far removed from car building or refinery designing and construction.

Early this year Pullman's car manufacturing subsidiary, Pullman-Standard Mfg. Co., did buy the Road Equipment Division of Isaacson Iron Works, moved the operations from Seattle to its own plant at Hammond, Ind. This deal, though not large dollarwise, plunged Pullman into the business of making bulldozers, scrapers, power units, and other earth-moving equipment, another transportation adjunct.

• **A Natural**—Pullman's operations have always been concerned with transportation; even oil refining is closely related, since the major products are gasoline and oil for transport vehicles. And so president Carry and the Pullman directors feel the Trailmobile acquisition is a natural. More than that, motor truck operations are an expanding business.

• **Same Techniques**—In manufacturing technique and materials employed, rail car construction and highway trailer manufacture are very similar. Some of Pullman-Standard's existing shop space, not needed for making railroad cars, may be turned into supplemental plant facilities for Trailmobile.

Added to this, Pullman's strong asset position—it has no outstanding preferred stock or bonds—will help the new wholly owned subsidiary finance truck trailer instalment sales. In fact, Pullman is considered financially strong enough to swing additional acquisitions like Trailmobile and Isaacson, should a likely proposition come along.

Don Metts, A. A. Metts Co., Charlotte, N. C.

"I hit the ceiling when I hear noise!"

says: DON METTS* of Charlotte, N. C.

METTS really hits the ceiling—with Gold Bond Acoustifibre tiles! Every square foot of this low-cost sound-absorbing material has 484 drilled perforations which serve as effective "noise traps". It's light, can be applied quickly, and gives the ceiling a clean, modern appearance.

Whatever your location, there's a Gold Bond Sound Control Engineer like Don Metts who will "hit" the ceiling for you... or solve any other noise problem you have. There are *six* Gold Bond Sound Control Products, and he'll recommend the one that fits your job and your budget. You can be sure of fast service that won't interrupt your routine.

FOR FREE SOUND CONDITIONING ESTIMATE... PHONE YOUR LOCAL GOLD BOND APPLICATOR

Central Roofing Co.	*Abilene, Texas*
Lydick-Browne Roofing Co.	*Albuquerque, N. M.*
E. L. Thompson Acoustics, Inc.	*Atlanta, Ga.*
Lloyd E. Mitchell, Inc.	*Baltimore, Md.*
DeFrances Marble & Tile Co.	*Baton Rouge, La.*
J. F. Ryan Company	*Billings, Montana*
Badham Insulation Co., Inc.	*Birmingham, Ala.*
Rees & Zale, Inc.	*Buffalo, N. Y.*
Dillaby Fireproofing Co.	*Cambridge, Mass.*
Acoustical and Floor Tile Co.	*Champagne, Ill.*
J. M. Sutler Acoustical Co.	*Charleston, W. Va.*
A. A. Metts Co.	*Charlotte, N. C....* *
Fisher-Busse Co.	*Chicago, Ill.*
National Sound Control Co.	*Cincinnati, Ohio*
H. A. Erf Acoustical Co.	*Cleveland, Ohio*
South Texas Materials Co.	*Corpus Christi, Texas*
Acoustic Builders Specialty Co.	*Dallas, Texas*
Myron Cornish & Co.	*Dayton, Ohio*
John C. Reeves & Co.	*Denver, Colorado*
H. N. Wikelund & Co.	*Des Moines, Iowa*
Turner-Brooks, Inc.	*Detroit, Mich.*
Lee Building Specialties Co.	*Eau Claire, Wis.*
General Insulation Co.	*Evansville, Ind.*
Lydick Roofing Co.	*Fort Worth, Texas*
Healey & Popovich	*Fresno, Calif.*
Northwest Michigan Acoustical Co.	*Grand Rapids, Mich.*
J. A. Walsh & Co.	*Houston, Texas*
General Asbestos & Supply Co.	*Indianapolis, Ind.*
Best Interiors, Inc.	*Jackson, Miss.*
Jacksonville Tile Co.	*Jacksonville, Fla.*
Eustis Lancaster Associates	*Johnson City, Tenn.*
Cockerell Engineering & Fireproofing Co.	*Kansas City, Mo.*
Tennessee Structural Products Corp.	*Knoxville, Tenn.*
Acoustical Engineering Co.	*La Crosse, Wisconsin*
The Sound Control Co.	*Los Angeles, Calif.*
Braun Acoustical Co.	*Louisville, Ky.*
Southwest Specialty Co.	*Lubbock, Texas*
Alexander Marble & Tile Co.	*Memphis Tenn.*
Acoustical Contracting Co.	*Merrill, Wis.*
Rowell Flooring Company	*Miami, Fla.*
Acoustical Sales & Engineering Co.	*Miami, Fla.*
Schauer Co., Inc.	*Milwaukee, Wis.*
R. R. McGregor & Associates	*Minneapolis, Minn.*
LeVan Tile Company	*Mobile, Ala.*
Building Specialties Co.	*Moorhead, Minn.*
National Acoustics	*New York, N. Y.*
Febre & Co.	*Norfolk, Va.*
Acoustical Sales & Plaster Co.	*Oklahoma City, Okla.*
Porter Trustin Co.	*Omaha, Nebraska*
Pearson Insulating & Dist. Co.	*Pharr, Texas*
Chas. M. Wall, Inc.	*Philadelphia, Pa.*
Standard Floor Co.	*Pittsburgh, Pa.*
Northwest Sound Control Co., Inc.	*Portland, Ore.*
McL. T. O'Ferrall & Co.	*Richmond, Va.*
Johnson-Olson Floor Coverings, Inc.	*Rockford, Ill.*
Utah Pioneer Corp.	*Salt Lake City, Utah*
Heat Control Insulation Co.	*San Antonio, Texas*
Morrison-Hope Co.	*San Bernardino, Calif.*
Asbestos Products Co.	*San Diego, Calif.*
Northwest Sound Control Co., Inc.	*Seattle, Wash.*
Acoustical Engineering Co.	*Shreveport, La.*
Midwest Acoustical Co.	*Sioux Falls, S. D.*
Queen City Wood Works & Lumber Co.	*Springfield, Mo.*
Missouri Builders Specialty Co.	*St. Louis, Mo.*
Midwest Marble & Tile Co.	*Tulsa, Okla.*
J. F. Kelley Co.	*Warsaw, Indiana*
A. W. Lee Co.	*Washington, D. C. (Arlington)*
Northern Steel Buildings, Inc.	*Watertown, N. Y.*
Todd-Roberts Insulation Co.	*Wichita, Kans.*
Lydick Roofing Co.	*Wichita Falls, Texas*
Wester Acoustical & Insul. Co.	*Youngstown, Ohio*
CANADA: William G. Kerr	*Toronto, Ontario*

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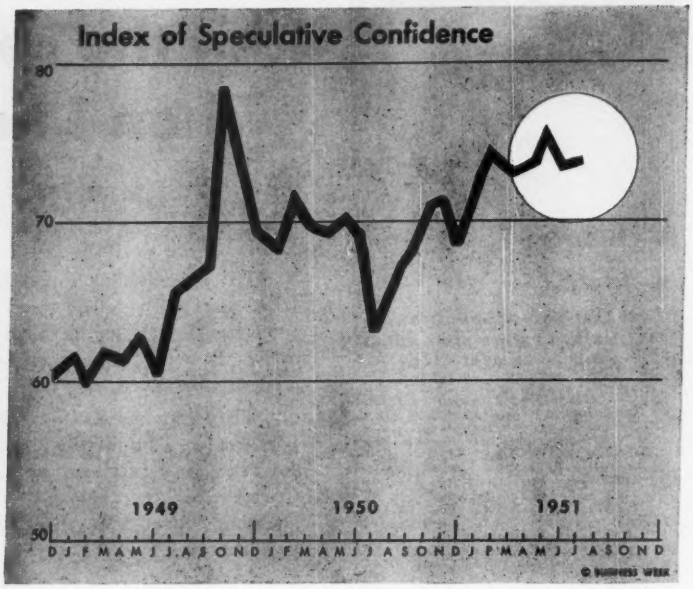
NATIONAL GYPSUM COMPANY • BUFFALO 2, N. Y.

THE MARKETS



Wall Street Is Choosy

Traders and investors go for blue-chip stocks that can increase profits in spite of higher taxes. Dow industrials might hit a new high, but what about the rails?

Investors and traders are beginning to show their heads again. That's obvious from the way stock prices have been advancing lately. And you can see it by looking at an index of speculative confidence.

You make an index of speculative confidence by dividing an index of stock prices by an index of business activity. The one in the chart (above) is based on Standard & Poor's 90-stock index and the BUSINESS WEEK Index of Business Activity. If stock prices rise faster or fall slower than business activity generally, the confidence index will rise. That's supposed to show that traders—the men who try to predict short-term trends in the market—feel confident about future prospects.

• **Blue-Chip Market**—According to the speculative index, traders are feeling better about the market. For the index has stopped falling, has even risen a bit.

This doesn't mean that the penny speculators are rushing into the market. The low-priced stocks aren't getting a play these days. Last week, for instance, Standard & Poor's index of low-priced stocks hit a new low for this year.

This market is far from being widely speculative. It is a selective market, with most attention centered on blue-chip stocks. The emphasis now is on oils and chemicals, the groups that have made out best, profitwise, under mobilization conditions (page 110).

• **Odds on Industrials**—There are plenty of reasons why companies in most lines of industry should earn quite a bit less in 1951 than in 1950. Higher taxes, the squeeze in profit margins caused by higher costs of labor and raw materials while sales prices are fixed by price control, and shortages of raw materials are all factors that will have their effect on corporate earnings this year.

Even so, a lot of analysts are predicting that the Dow-Jones industrial average will make a new postwar high before long. At midweek the average was around 258, only five points below the postwar high established early in May. Since this average is made up of blue-chip stocks, it was bound to respond to the kind of market activity we are having now.

• **Rails May Upset the Cart**—But these analysts don't believe that a new high for the industrials is going to mean

smooth sailing for the market. A lot depends on how the rail stocks make out. Analysts figure that the Dow-Jones rail average will have to confirm the industrials by rising to a new postwar high, before a base can be made for a major bull market advance.

So far, the rails have been going right up with the industrials, but they may run into tough sledding once they have gone above 80. That's because the rail average was between 80 and 90 during the first three months of this year. Quite a few people who bought rail stocks then would be ready to sell them as soon as they can get out without taking a loss. So between 80 and 90 is what technicians call a "supply area" for the rails.

If the rails are not able to follow along with the industrials, some analysts expect a pretty sharp "correction" in the industrial average, perhaps to as low as 230.

First-Half Dividends Hit New High

The mixed trend of second-quarter earnings (page 110) didn't affect dividends in that period. They rose sharply. As a result, first-half dividend payments on common stocks listed on the New York Stock Exchange nearly hit a fabulous $2.5-billion level—for the first time in history.

The actual figure was $2,454,545,000. That's 17.3% greater than last year.

At first blush, it looks pretty much like an across-the-board performance. Some 88% of all Big Board commons paid dividends. Over 42% were also able to hike such payments.

But a second look will give you a somewhat different picture. Four groups—the oil and natural gas, auto, utility, and chemical shares—carried a disproportionate share of the load. They accounted for less than 29% of all listed issues. Yet they provided some 53% of the dividend total and 62% of all this year's gain. If, for any reason, one or more of those groups started slicing dividend payments, it would change the over-all dividend picture considerably.

From here on Wall Streeters expect the year-to-year gain shown by the dividend total to narrow. That doesn't mean that they expect many changes in regular rates, but they think many corporations may be much less generous with yearend extras this year than in 1950.

	No. Issues in Group	Number of Dividend Payers	Dividend Results 1951 vs. 1950 Higher	Same	Reduced	Approx. Amount of Dividends (000 omitted) 1951	1950	% Change 1951 vs. 1950
Aircraft	24	15	8	6	2	$18,775	$15,264	+23.0%
Amusement	23	17	5	9	3	29,693	32,451	− 8.5
Automotive	72	62	37	19	6	276,489	210,418	+31.4
Building trade	30	29	14	15	....	28,162	23,947	+17.6
Chemical	80	75	45	26	5	273,971	239,067	+14.6
Electrical equipment	21	20	13	5	2	66,512	65,788	+ 1.1
Farm machinery	7	7	3	2	2	27,732	25,773	+ 7.6
Financial	32	28	14	11	4	39,665	49,151	−19.3
Food prpducts, beverages	70	63	17	39	7	107,363	104,439	+ 2.8
Leather, leather products	11	8	3	4	1	9,501	9,539	− 0.4
Machinery, metals	103	99	51	36	12	82,361	71,743	+14.8
Mining	42	33	24	8	1	89,928	66,075	+36.1
Office equipment	10	9	2	6	1	15,386	15,294	+ 0.6
Paper, publishing	36	31	15	10	6	43,189	33,741	+28.0
Oil, natural gas	47	45	27	17	1	366,257	286,138	+28.0
Railroad, railroad equipment	81	60	21	35	4	120,332	99,202	+21.3
Real estate	10	8	5	2	1	7,207	6,165	+16.9
Retail trade	70	64	17	40	7	142,179	128,669	+10.5
Rubber	9	9	6	3	....	18,156	14,353	+26.5
Shipbuilding, operating	11	8	...	6	3	5,976	7,235	−17.4
Steel, iron	39	35	26	5	4	115,675	92,171	+25.5
Textile	43	42	23	17	2	46,462	33,815	+37.4
Tobacco	16	15	...	13	2	39,468	40,315	− 2.1
Utilities	101	94	35	57	3	378,629	334,183	+13.3
U. S. companies operating abroad	25	17	12	2	3	37,255	27,393	+36.0
Foreign companies	18	12	4	7	3	51,101	46,582	+ 9.7
Other companies	18	17	9	6	2	17,121	14,103	+21.4
Total	1,049	922	436	406	87	$2,454,545	$2,092,536	+17.3%

DEFENSE BUSINESS

What's Holding Up the Works?

Mobilization agencies are still groping for a clear-cut policy on government loans and fast amortization. Unless they get one, the expansion program is going to be bottlenecked in spots.

The mobilization agencies are still fluttering around, trying to get together on just what kind of policy they will follow in granting government aid to industrial expansion.

Confusion reached such a point this week that chief mobilizer Charles E. Wilson canvassed all the bureaus—Defense Production Administration, National Production Authority, and the rest—for new decisions. Wilson was still smarting from Congress' complaints that his subordinates were too liberal with government money and tax write-offs, while, at the same time, resources development wasn't going fast enough.

• **Tough Sledding Ahead**—Whatever the huddle produces, this much seems certain: Newcomers to Washington seeking either fast tax writeoffs or loans will find the going tough—no matter what their project is. That's the way things are shaping up—despite the fact that only this week Truman's economic advisers reported that the U. S. economy was not expanding too much.

But the men who bear the brunt of congressional criticism don't see things quite so academically as the economists. The difference is that Wilson's men have to answer for their acts in the spotlight of a Capitol Hill investigation.

In the meantime, a lot of expansion programs are being held up while the agencies wrestle with the tape.

• **Taconite Bottleneck**—Take the case of low-grade iron ore (taconite). In the original Defense Production Act, Congress proclaimed that every effort should be made to get new sources for Lake Superior ore. Reserve Mining Co., a combine, rounded up financing from private investors to put up a pilot plant and a 2.5-million-ton commercial plant. It asked the Defense Minerals Administration for two certificates of necessity to permit fast amortization of 85% of an $89-million project.

Interior Secretary Oscar Chapman took his experts' word and chopped the request to 75%. At DPA the feeling was that other iron ore certificates totaling over $50-million had been approved at 85%—and Reserve Mining should get the same break. Outcome: So far Reserve Mining has got neither.

• **Aluminum Run-Around**—For another example, take the case of aluminum. The government's 750,000-ton expansion program is supposed to bring a new independent into the industry. But the entrant, Harvey Machine Co.—with $5.5-million of its own money on the barrelhead—isn't getting very far with its application for a $40-million government loan. (Harvey would get the loan from the Reconstruction Finance Corp., but Chapman's Defense Minerals Administration has to approve it.)

Bonneville Power Administration is ready to supply power from its Hungry Horse Dam; and amortization has been O.K.'d for 85% of the cost of an alumina plant, a reduction plant, and ships to bring in bauxite from the West Indies.

Harvey is about Chapman's best bet of getting an independent in the business. The Justice Dept., as well as Rep. Celler's congressional antimonopoly committee, insists that the expansion be divided so as to keep the big three from getting too much bigger. But Harvey can't seem to shake loose an approval from DMA, whose people are afraid of a kickback on government loans. The company has a new appeal before Chapman and Interior Undersecretary Searles now. But unless a decision is forthcoming soon, Harvey may have to throw in the towel.

• **GM Stymie**—Then there's the case of aluminum fabrication. General Motors has been turned down for an amortization certificate on a $2.7-million casting plant at Jones Mill, Ark., to turn out torque converters for tanks.

GM's Fabricast Division wants to put the plant adjacent to Reynolds' Jones Mill reduction plant, take molten aluminum hot from the pots, and pour it into molds. This dovetails into the government's desire to decentralize industry. It also provides a new ready source for Reynolds' increased reduction capacity now abuilding.

GM is trying to persuade Washington to reconsider. But there's a growing feeling that the government has given a hand for about as much expansion of aluminum—and steel—as it needs in the rearmament program.

If this view prevails when Wilson gets his answers in from the mobilization agencies, GM will be out of luck.

Plants Shun Coasts

Manufacturers need more room for all-out expansion, are finding it in the nation's interior and are building there.

Private industrial building is on the move—away from the traditionally industrial coastal areas and into the interior sections of the country. It's not government prodding that's causing manufacturers to converge on the nation's midsection. They're doing it entirely on their own. Nor is it caused simply by fear of possible coastal bombing attacks.

• **First Signs**—The shift first became marked in 1949. Manufacturers began to shun the older, crowded industrial areas for the wide-open spaces where they sought, and found, cheaper land, better communication facilities, and larger available areas for plant expansion.

Since then, the need for expansion to fill both military and civilian demands has speeded up the trend. An Engineering News-Record survey of contracts awarded during the first six months of 1951 tells the story.

• **Figures Speak**—Of a record total of $2,375-million in contracts let during the first half of 1951, $623-million worth went to the Middle West, and $575-million to the area west of the Mississippi. That's 50% of the total. Other areas' prizes: Middle Atlantic, $544-million; South, $437-million; Far West, $146-million; and New England, $50-million.

Compared with 1949, the Middle West gained five percentage points of the national total to cop first place. The area west of the Mississippi actually lost ground percentagewise—four points—but held in second place. The Far West and New England, though, took a beating, dropping 13 percentage points to 6% and two points to 2%, respectively.

• **Backlog**—ENR's measured backlog figures bear out the long-held opinion that the march into the interior is a permanent trend. With a record high of $7,596-million in industrial building contracts on the books, 57% is earmarked for the Middle West and the area west of the Mississippi.

Backlog recorded for the Middle West doubled between June 1, 1949, and June 1, 1951. In the South, backlog doubled, too, pushing that area up from 11% to 12% of the national total. New England, where contracts have been dwindling for some years, moved up from 2% to 5% of the national total. Middle Atlantic backlog fell from 20% to 16%.

Feast or Famine?

NPA says there's plenty of chromium. But other officials clamor for controls that will help build up stockpile.

Maybe chromium is so plentiful we can afford to put tons of it on buildings as stainless steel decoration. That's the view of NPA, top allocater of mobilization metals.

Or maybe it's so scarce we have to clamp on more controls in order to build up the stockpile. That's the view of Defense Minerals Administration, which has control of ores.

• **Pet or Spank**—It's even possible that both views are right—a paradox that is turning chromium into the No. 1 problem baby among the bureaucrats. They don't know whether to pet it, spank it, or both.

So far it's been petted—and for a plain reason. Alone among the alloys that give hardness and heat resistance to steel, chromium is in ample supply to industry.

Not that it lacks important war uses. It goes into armor plate, tank transmissions, propeller shafts, springs, gears, bearings, high-speed cutting tools. It is a prime part of the chromium-cobalt-tungsten-molybdenum cast alloys that are essential to jet engines.

But supplywise, it has been consistently on good behavior. NPA says it is not the limiting factor in any defense product. As a result, chromium is not under any specific production bans as other alloys are. A 45-day inventory limitation is the only rule laid down for it.

• **Sheathing**—When the Equitable Life Insurance Co. announced it was going to sheath four buildings in Pittsburgh with stainless steel containing 17% chromium, nobody in NPA was disturbed.

NPA's interest in the Equitable order was to protect nickel, which is combined with chromium in the most common types of stainless steel. Nickel for such a purpose as Equitable's is banned in NPA orders. But not chromium by itself.

The result of chromium's unique freedom among the highly restricted alloys is a rush of promotional activity. An all-chromium stainless for sheathing is something new in the industry, which wants the Equitable plan to go through. It hopes this kind of stainless will, in the future, compete with aluminum and other building materials.

• **Stockpile**—Defense Minerals Administration takes a dim view of these ambitions, at least until the stockpile is increased. The Munitions Board stocks

chromite, the ore from which chromium is made. It doesn't take an expert to figure the stockpile is getting little chromite these days. The excess of imports over industry use in the first quarter was 53,000 tons out of a supply of 360,000 tons.

DMA believes the solution is to allocate ores. It has the power, but wants NPA to agree. NPA officials argue that there hasn't been a real case of chromium shortage in industry in the past several months. Some of the former steel men now with NPA suspect DMA really wants to pump low-grade domestic chromite into the pipeline, in the interests of U. S. producers.

• **Need for Imports**—This suspicion goes to the heart of the chromium argument—our dependence on imports. Practically no chromite was produced in the U. S. in the first quarter of the year. At the peak of World War II expansion, after millions had been spent, we produced only 16% of our needs. As soon as the Mediterranean was made safe, the U. S. program was sidetracked in favor of foreign ores.

Russia, the world's biggest producer, cut off supplies to the U. S., the biggest consumer, early in 1949. Since then, expansion of Turkish output has more than made up for what Russia has denied us.

If Turkey were overrun by Russia or if the sea lanes were denied us, today's plentiful chromium would become short in a few weeks—except for the stockpile.

It's a fairly good bet that chromite will be allocated, but that its relative freedom will not be curtailed to any serious degree.

DEFENSE BUSINESS BRIEFS

Brass mill products are running low; pretty soon there'll be nothing to sell. That's the plaint of the distributors, who want NPA to issue an order assuring inventory replacement. NPA promised nothing, but says such an order is being studied.

•

Industrial power truck makers told NPA they might have to trim their labor force 30% to 40% because they don't have big enough material allocations in the third quarter. Copper drew their heaviest fire.

•

Distributors and jobbers who ship relief supplies into the Midwest flood area will get special help in rebuilding stocks, NPA says. The agency has assigned a team of experts to estimate industrial damage; the Munitions Board will survey damage to military production.

CHECKLIST: Defense Regulations

The following listing and condensed description cover all the materials and price-control regulations issued by the defense agencies during the preceding week.

Full texts of the materials orders may be obtained from National Production Authority, Washington 25, or from any Dept. of Commerce regional office.

Full texts of the price orders may be had from the Office of Price Stabilization, Washington 25, or from the regional OPS office in your area.

Materials Orders

Chemicals: Adds chrome yellow, chrome orange, and phenol formaldehyde to Schedule A of M-32 as amended (July 17).

Steel: Permits metal fabricators who acquire title to foreign-produced steel before it arrives in U.S. to use it in addition to their CMP allotments. Copper and aluminum are not included. CMP Reg. 1, Dir. 4 (July 17).

Priorities: Revises and updates the basic rules of the priorities system and liberalizes provisions concerning use of DO ratings to replace materials taken from inventory. NPA Reg. 2 as amended (July 17).

Electric utilities: Requires utilities to get authorization from the Defense Electric Power Administration to commence construction of major plant additions or to use controlled materials for them. M-50 as amended (July 17).

CMP: Revises definition of "operating supplies" to permit producers of controlled materials to obtain other controlled materials as operating supplies. CMP Reg. 5 as amended (July 17).

Pricing Orders

Nonmetallic minerals: Exempts these minerals from the Manufacturers General Pricing Order. CPR 22, Interpretation 33 (effective July 16).

Coated fabrics: Provides manufacturers with optional alternate methods of computing increased labor and material costs for coated fabrics. CPR 22, SR. 11 (effective July 20).

Georgia brown iron ore: Raises ceiling price on brown iron ore produced in Georgia to encourage new exploration and improvement and expansion of facilities. GCPR, SR. 41 (effective July 17).

Tungsten: Establishes higher ceiling prices, with varying increases, for manufacturers of high-speed tool steels and specialty steels containing tungsten, hard-facing products containing tungsten, and pure tungsten and thoriated tungsten products. GCPR, SR. 42; CPR 22, Amdt. 17; CPR 30, Amdt. 5 (effective July 19).

Motor carriers: Permits local pick-up and delivery and local transfer carriers to make application to OPS for an adjustment in rates and charges. GCPR, SR. 40 (effective July 19).

Residual fuel oil: Clarifies method of applying authorized ceiling price increases; spells out specific ceiling price increases for cargo sales and at inland points; permits a 17½¢-per-bbl. increase to sellers in Puerto Rico and Virgin Islands. CPR 17, Amdt. 3 (effective July 24).

Contract motor carriers: Motor carriers, other than common carriers, are permitted to apply for adjustment of ceiling rates because of increases in wage, material, and equipment costs sustained during and since the latter part of 1950. GCPR, SR. 39 (effective July 20).

Bedding: Permits bedding manufacturers to continue identical pricing of mattresses and matching box springs if that has been their established practice in the past. CPR 22, SR. 13 (effective July 25).

Dog food: Places manufacturers of dry dog food under provisions of the manufactured feeds price regulation for price control purposes. GCPR, SR. 7, Amdt. 1 (effective July 25).

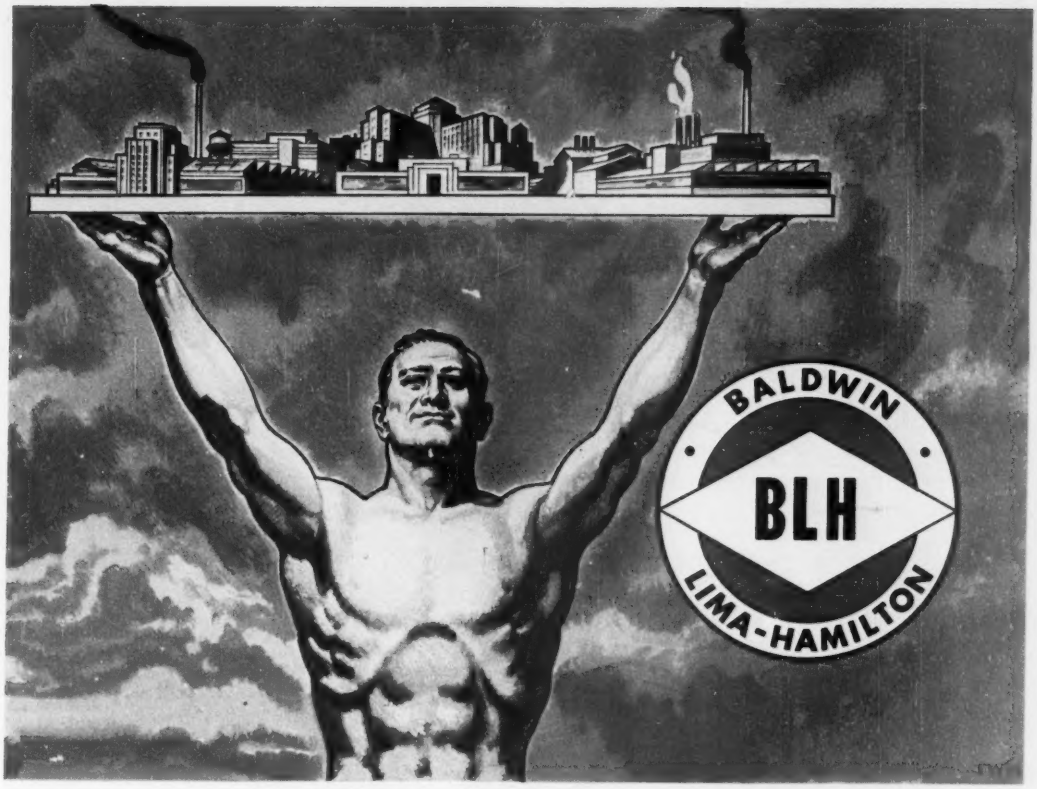
Slaughter quotas: Increases July slaughter quotas for calves and swine. Dr. 1, Amdt. 3, Supp. 1 (effective July 18).

Soft drinks: Permits bottlers of 6-oz. to 12-oz. bottle size soft drinks to increase their wholesale prices a maximum of 16¢ providing the resultant price does not exceed 96¢ a case of 24 bottles. GCPR, SR. 43 (effective July 28).

Pricing under manufacturing orders: Manufacturers may start pricing under CPR 22 and related manufacturing regulations if they had announced prices before July 1 even though the price lists were not effective until after that date. GOR 13, Amdt. 1 (effective July 25).

Apparel: Permits apparel manufacturers to start pricing immediately under the apparel manufacturers' regulation CPR 45. GOR 13, Amdt. 2 (effective July 23).

The Pictures—Cover by Dick Wolters. Acme—21 (lt.), 24, 130; Hans Basken—47; Cal-Pictures—79; Canadian National Railways—132 (top); Bill Clinkscales—78; General Electric Co.—88; Joern Gerdts—22, 23; Int. News—25; Kaufman & Fabry Co.—30; Frederic Lewis—40; Reni—44; Dick Wolters—52, 96.



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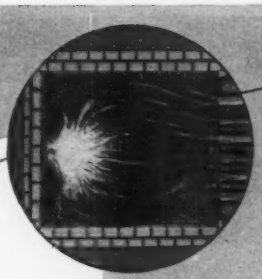

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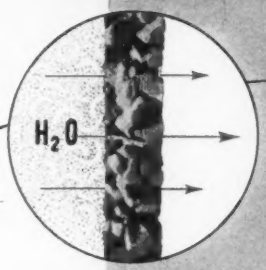

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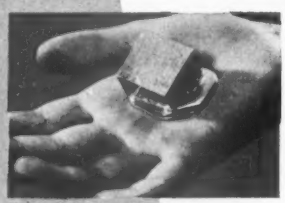

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INTERNATIONAL OUTLOOK

BUSINESS WEEK
JULY 28, 1951

A BUSINESS WEEK SERVICE

The truce talks in Korea seem to be back on the rails, despite all the huffing and puffing on the part of the Communists.

The best guess is that they mean to go ahead with a cease-fire—but with plenty of side trips for propaganda reasons.

Still Washington isn't certain about the outcome. Officials are even beginning to think out loud about what we'll do if the talks collapse. One thing to remember: The Administration above all doesn't want the country to get the idea the truce is in the bag. It fears a letdown in our defense effort.

•

There wasn't a single dove of peace in Warsaw last weekend. The Politburo's No. 2 man, Molotov, let loose an especially fiery blast at Yugoslavia and the West.

The Warsaw podium was graced by some of the biggest Kremlin bigwigs. Still no one takes the Molotov threats too seriously. It's likely the speech was meant as a warning to the satellites, whose dissatisfaction with Moscow rule seems to be growing.

•

Meanwhile, new strains and crises are popping like mushrooms from the Pyrenees to the Himalayas.

- Britain and France are dour over U. S. dickering with Spain.
- The Middle East pot is bubbling more furiously than ever, following last week's assassination of King Abdullah of Jordan.
- The possibility of open war between India and Pakistan becomes more acute each day.

•

U. S. attempts to sign up Spanish bases have put a new strain on the Atlantic Alliance.

Both London and Paris are looking nervously over their shoulders at the powerful left-wing elements at home. British, and especially French, workers have a vivid memory of the Spanish civil war and fascism. They may show their displeasure at a U. S.-Spanish deal by bolstering the Bevan opposition in Britain, helping discourage a strong government in France.

There are military considerations, too. Frenchmen ask, "Where will our country be defended—on the Rhine or the Pyrenees?" They don't think Spanish bases are needed to contain Russia; they wonder if Washington is losing faith in Western European defense.

The Spanish squabble could make Eisenhower's job of forging Atlantic unity a lot tougher.

•

Washington will stick to its guns on Spain.

The Pentagon insists that we have Spanish bases ready in case the Russians hit the warpath before European armies are in shape. Washington thinks a second line of defense might be good insurance.

To that extent, there's some basis for British and French suspicions that we're thinking in terms of a Pyrenees defense line. If the Red Army moved soon into Western Europe, we'd have no choice.

But it's no more than that kind of term insurance. The overriding aim is still to build strength enough to contain the Russians in the middle of Europe.

•

Abdullah's assassination was a vicious body blow to U. S.-British influence in the Middle East.

Abdullah, like Iran's Gen. Razmara and Lebanon's Premier Riad es-Solh,

was pro-Western and a moderate. Each has died under terrorist guns during the last six months.

The killing is bound to fan the flames of extremism from Pakistan to Morocco. And it means that no Middle East leader will dare follow a pro-West policy.

•

One possible repercussion of Abdullah's death is a new round in the Arab-Israel war.

The former Grand Mufti of Jerusalem, now lurking in Cairo, may try to use the confusion to set up an independent Arab Palestine. Palestine Arabs suffered under Abdullah, hate the Jordanians. Any such move would be the signal for the Israeli to push east to the Jordan River—perhaps beyond.

The blow to British influence will encourage the Egyptians to get tougher with London about control of the Suez Canal. Also, the new trouble just about rules out the hope of a strong Middle East defense bloc tied to Turkey.

Any way you slice it, the Communists benefit. They've been actively backing the extremist Arab factions. And the Mufti, among others, has taken Moscow gold, according to intelligence reports.

•

There's one ray of hope in the Middle East: Thanks to W. Averell Harriman's prodding, the Iranians are making a new proposal to Britain.

Washington feels that the only compromise Premier Mossadegh can accept now is formation of a new, privately owned company with Iranians on the board—operating exclusively in Iran. The British would balk at this. But odds are they'd have to swallow it in the long run.

•

India and Pakistan are snarling louder than ever over Kashmir.

Tension has mounted steadily for four years. Now the Indians have moved fully 90% of their field army to the Pakistani frontier. Deep passions have been roused. The Indians have much the best forces, but the Pakistani have millions of armed tribesmen at their beck and call.

An Indian-Pakistan war could raise havoc with the Commonwealth (of which both nations are members). At worst, it could signal a larger calamity. Russia is nearby to stoke the fires.

•

The French are having a rough time setting up a government.

Two week's arguing hasn't produced any compromises on major domestic problems—how to finance 10 new divisions for Eisenhower, how to reduce the growing budget deficit, etc.

De Gaulle hopes the continued disagreement of the center parties will force the National Assembly to turn to him for leadership of a rightist coalition.

•

Foreign borrowers are going to have a tougher time getting private United States loans.

The voluntary credit restraint committee has decided to apply the same criteria to the granting of foreign loans that govern domestic loans. It means: no loans to buy existing companies or plants, or for retiring or acquiring corporate equities; no loans to repay loans; no loans for speculative investment.

BUSINESS ABROAD

This Is the Turning Point in U.S. Trade

● Commercial EXPORTS are as high as they are going to be for a long time.

● In April and May they were running at a $15-billion-a-year rate.

● Now they have started to drop. The full year will probably be no more than $13-billion.

● They'll keep on dropping until next summer, then probably level off to a rate not much above $12-billion.

● IMPORTS are dropping, too.

● They were holding a $12-billion-a-year pace in April and May. For the full year the total will probably be about $11-billion.

● On net, the U.S. trade SURPLUS will drop by yearend, continue small through the rearmament period.

Not all private traders will agree with the figures above. But they're the carefully weighed opinion of foreign trade experts in Washington. To these government dopesters, the pattern of U.S. foreign trade looks pretty clear for the next year or two, unless continued fighting in Korea—or any new Koreas—upset the applecart.

• **Lower Demand**—Here's how these analysts see the export outlook:

Foreign countries will try to put off their buying in the second half of 1951 so they can cash in on a post-Korean price slump. And quite apart from this slackening of foreign demand, exports will be cut by the dwindling of exportable supplies here as civilian production cutbacks begin to squeeze.

Break foreign demand down region by region, and you get the same result.

Canada's buying spree will be over soon; Ottawa doesn't have the dollars to support it. The Canadian dollar deficit is running at an annual rate of $700-million to $800-million. What's more, heavy Canadian purchases of military equipment are in the offing. So civilian imports are bound to be sliced deeply.

Latin American countries have been buying madly from us for the last eight months. Some Latin nations have been converting their dollars into good as fast as they have earned them. They figured the dollar was depreciating, so they had better spend it fast. They also wanted to get our goods before production cutbacks throttled supplies. But Latin American inventories are way up now, and dollar reserves in some cases are way down. So new breaks in imports from the U.S. can be expected before long.

Western Europe has been spending its dollars cautiously since Korea. Memories of the 1948 dollar gap at first made Europeans hold onto their reserves even at the cost of running down inventories. Despite this, Western Europe's dollar gap has widened from an annual rate of $900-million in the fourth quarter of 1950 to over $1.5-billion now. Moreover, Western Europe still hasn't felt the full shock of rearmament or of cutbacks in East-West trade. That makes it almost certain that European countries will slash civilian imports from the U.S. in the second half of the year.

Far Eastern countries have been hoarding their dollars right along. Fears of invasion or civil unrest make them want to keep their assets liquid. Also, they have been having trouble getting the kinds of heavy U.S. capital equipment that they need most. Political instability in the Far East will continue, and heavy capital equipment probably will become tighter here as rearmament goes on. So U.S. exports to the Far East will tend to fall off.

I. Favorable Factors

On the other hand, there are some things that will hold total U.S. exports up for the next year or so. There's a big demand for U.S. grain and coal in Western Europe. Grain shipments to Japan and India are on the upswing, too.

• **Grain**—One-third of the increase in U.S. merchandise export during the first quarter of 1951 came from bigger shipments of grain to Western Europe and Japan. At the same time, Indian grain shipments jumped from 93,000 tons in the fourth quarter of 1950 to 150,000 tons in the first quarter of this year; during the second quarter they probably topped 500,000 tons. This year Western Europe has a bad grain crop; shipments from Eastern Europe are dwindling to a mere trickle.

• **Coal**—Coal exports to Western Europe are now running at an annual rate of 15-million tons a year. They'll probably go higher as European rearmament gathers speed. Loss of Iranian oil is going to boost them still higher by increasing the substitution of coal for oil.

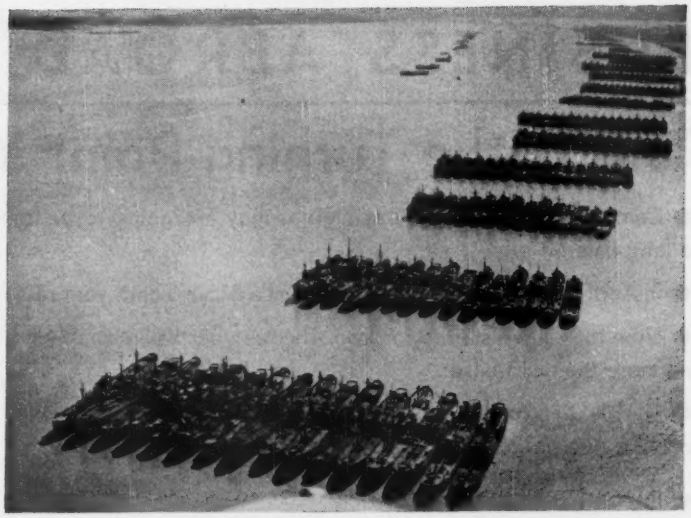
II. Invisible Trade

As for exports and imports of services—our "invisible" trade—the picture looks about this way:

Exports of services have gone up since the first of the year, thanks largely to the 10% to 15% boost in outbound shipping rates. Income from foreign investments is running 25% higher than in the first quarter of 1950, but it's down from last half of 1950. Both these accounts are expected to hold fairly steady more or less indefinitely.

Imports of services will probably be up this year. U.S. military spending abroad will continue to climb as more GI's sail for Europe and other soft spots around the edge of the Soviet empire. And U.S. tourists are expected to spend more and more dollars abroad as long as war holds off. European economists estimate that 25% of Western Europe's dollar will come out of the pockets of American tourists in the next few years.

All this still adds up to a long-range prospect of high-level trade, even though the level will be somewhat lower than for the last few months. And U.S. trade will be more in balance than it has been since World War II. That's largely because our huge industrial expansion has made us a net importer on a massive scale of nearly all key raw materials.



U.S. Mothball Fleet Weighs Anchor...

...Headed Abroad With Arms, Wheat

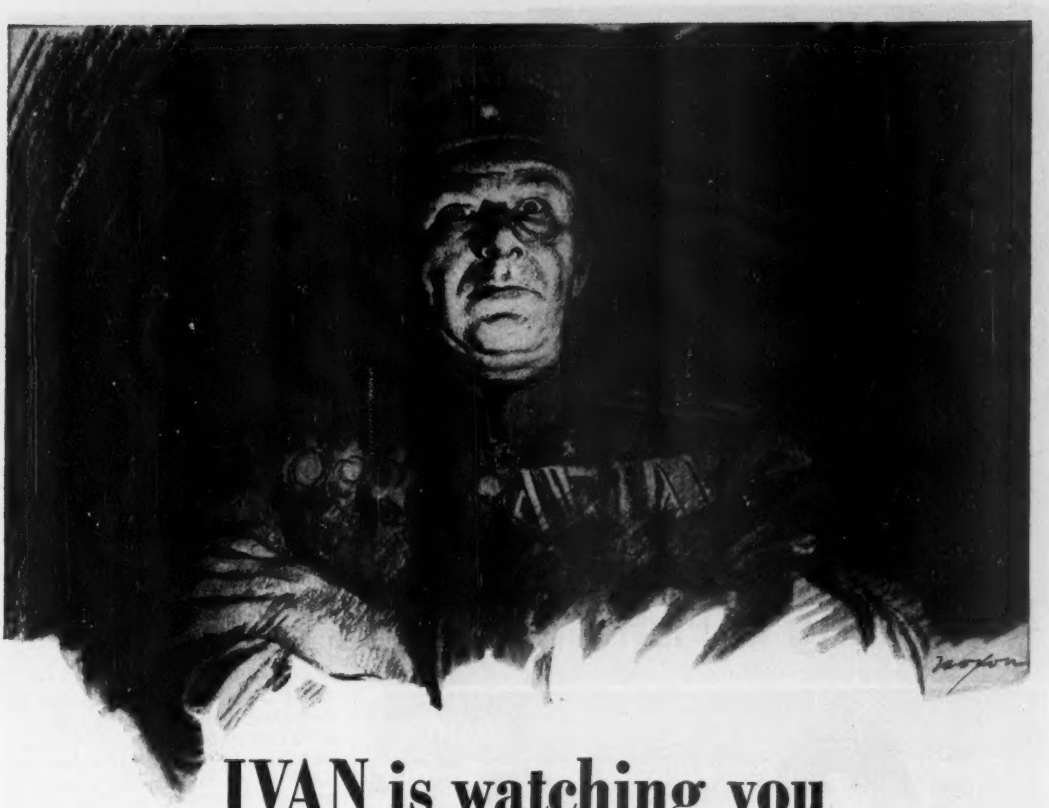
Old sea dogs, who get a spiritual lift every time a dead ship comes back to life, must have been feeling fine last week.

The U.S. government went back to its cupboard and took 33 more cargo ships out of the mothball fleet. That brings to 400 the number of World War II vessels that have been taken off the shelf since the Korean War. About 1,700 remain.

Most of the 33 are needed to haul grain to famine-struck India under the $2-million U.S. loan. Some will join the others pulled out during the last year, carrying war material to Korea, defense hardware to Atlantic Pact nations, plus ECA grain, coal, sugar, etc. On return trips, some ships will haul strategic materials to the U.S. stockpile.

• **No Competition**—National Shipping Authority runs the ships—chartering some to private shipping lines. As a whole, U.S. ship operators aren't worried much about competition from this big addition to the merchant fleet. Alone, private operators can't possibly fill the demand anyway. Besides, most of the ships are bulk carriers; they don't compete with general "liner cargo" freight services. Also, the ships will help stabilize bulk freight rates. Since the U.S. is short of carriers, foreign-owned ships have been upping rates.

The 400 ships so far demothballed are the cream of the crop. Most of the 1,700 still in storage are so decrepit they'll never go to sea again.



IVAN is watching you

IVAN is a dyed-in-the-wool Communist. There are only 6 million party members like him in all Russia, yet these Communist brass-hats enforce the iron dictatorship of the Kremlin over *200 million* Russians.

He's sold to the hilt on Red ideas. Which means he's out to get *you*. He believes it's either you or him . . . that the world is too small for both.

Ivan is working hard to beat you down. He has a big head start.

Right now he's got you in a bad spot.

Ivan is afraid of only one thing.

He fears your ability to out-produce him in guns, tanks, planes.

Frankly, he doesn't think you value your free system enough to do it . . . to make willingly the sacrifices he has squeezed out of the Russians.

But he's wrong!

Because you and all of us have set out to build more and better weapons—to do it faster all the time.

We must use every bit of know-how and inventive skill we have to improve our machines and methods—to turn out more and more for every hour we work. Only in this way can we become militarily strong.

But we've got to supply essential civilian needs as well. We can't allow needless shortages to take prices skyrocketing and lower the value of our dollar.

Sure, that means sacrifices for everybody. But doing this double job well is the only sure way to stop Ivan in his tracks—and to save the freedoms which are ours and which he has never known.

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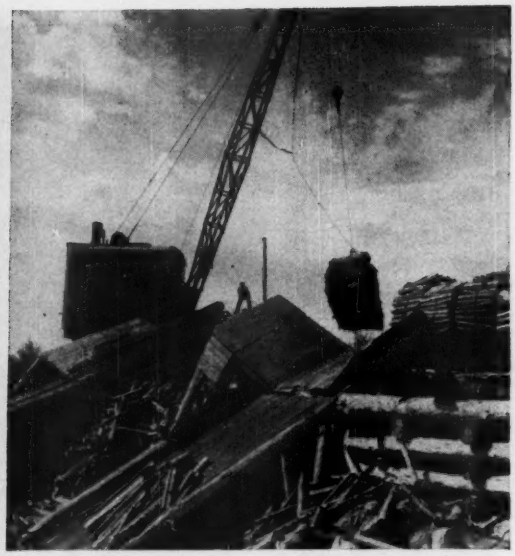

CHIPS of pulpwood. Now two men are . . .

Remaking a Fish and Chips Economy

MEN Premier Joseph R. Smallwood (right) and Dr. Alfred A. Valdmanis, his economics chief, have found new manufactures, such as these briefcases.

Just a year ago Premier Joseph R. Smallwood (left) promised an economic revolution for Newfoundland, Canada's bleak, sparsely populated 10th province. Some people tabbed him a dreamer. Newfoundland, they said, had lots of codfish and trees and a few mineral deposits; it was no place for industrial development.

But Smallwood and his sidekick, Dr. Alfred Valdmanis, Newfoundland's Director General of Economic Development, said their program would make or break Newfoundland. Now, one year after the promise, there's a lot more "make" than "break" on the ledger:

• Starting from scratch, the Smallwood-Valdmanis team has brought eight new manufacturing industries to Newfoundland. Seven more are in the offing.

• U.S. and Canadian capital—Harriman Ripley Co. and Cement & General Development Co. of New York, Wood, Gundy Corp., and Wills, Bickle & Co. of Toronto—joined forces with the provincial government last month to set up a development company.

• Canadian mining interests—Falconbridge Nickel Mines and Frobisher, Ltd.—have taken big concessions for mineral exploration. A few weeks ago Falconbridge announced discovery of five new copper and zinc deposits.

• A European financier—Dr. Arthur Seigheim—has begun to open up Newfoundland's mainland timber stands in Labrador, estimated at 40-

million cords. He'll cut 200,000 cords of pulpwood yearly on a 1,400-sq. mi. concession, send the wood to Europe. There's hope the operation will eventually bring a newsprint mill to Labrador.

• Though it's not part of Newfoundland's development scheme, the much-publicized Hollinger-Hanna iron project along the Quebec-Labrador border will mean big dividends for the province once it gets rolling in a few years (BW—Dec.23'50,p48).

• **Year of Miracles**—That list of projects, according to Dr. Valdmanis, makes 1950-1951 a year of miracles for Newfoundland. History bears him out.

For nearly 400 years after John Cabot discovered the island in 1497, the only industry was fishing. In 1895 small iron mines were opened. Since then, two paper mills and some mines for copper-lead-zinc and fluorspar were about the only additions to Newfoundland's economic armory. Fishing remains the No. 1 industry, employing more than 30,000 of the province's 321,819 population.

Newfoundland hit rock-bottom in 1932, when the British government took it over from dominion status to save it from bankruptcy. In March, 1949, Newfoundlanders voted to join Canada as the 10th province, rather than go back to a dominion footing.

• **Sparkplug**—Joseph Smallwood, leader of the Union-With-Canada campaign, became the first provincial premier. Writer, editor, union organizer, farmer, and politician, Smallwood had always dreamed of diversifying the economy, ending the dangerous dependence on fishing. He turned to the federal government for technical help and got it in the person of Dr. Alfred Valdmanis, a Latvian economist known in prewar Europe as a hotshot finance and idea man.

Smallwood and Valdmanis hit it off immediately. Work is their dish; neither bats an eye at working all night, having breakfast, then going at it again. They set about stirring up investor interest in Canada, the U.S., and Europe (BW—Sep.30'50,p127).

• **Fishy Eye**—At first, prospective investors were dubious. So the team of officials decided the Newfoundland government itself would have to start the ball rolling. Valdmanis drew up a plan for the province's first cement plant, to turn out 100,000 tons annually. A German firm built it at a cost of $3.5-million. The plant will get into production next month.

With this plant as a precedent, Valdmanis lined up a slew of other projects: a gypsum plasterboard plant, a plaster and lath plant, a birch mill, and others. Still the chief aim was to entice private capital.

The break came when Smallwood

clues: TO THE SOLUTION OF MANAGEMENT MEN'S PROBLEMS.

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HELP WANTED?

if your organization needs personnel at the management level use this "clues" section of BUSINESS WEEK to make quick, effective—and economical contact with them.

and Valdmanis sold Harriman Ripley and the other investors on an idea for a tax-free Crown corporation called Newfoundland & Labrador Corp. It was set up last month with an initial capitalization of $1-million. The government holds 90% of the stock, the private interests 10%. Though the proportion of private money is low, Smallwood thinks the company will be able to interest the capital markets in the U. S. and Canada.

Newfoundland & Labrador Corp. will take over huge blocks of natural resources and try to develop them, finding money wherever it can. So far it has a 99-year timber concession, big mineral rights, waterpower rights.

• **More Breaks**—Early this month came other good breaks. Agreements were signed for a $300,000 tannery and leather goods plant, a $1.5-million fur processing and dyeing plant, a $5-million heavy machinery outfit. European capital and technical help will participate in these ventures. And before the year is out, Smallwood and Valdmanis expect to welcome a marine oil hardening plant, two chemical outfits working with fish byproducts, a cement block plant, a shoe factory, a furniture factory, a fish processing plant. Several of these will have U.S. capital behind them.

These developments have encouraged Newfoundland boosters to set their sights even higher. Now there's optimistic talk of two more paper mills—one in Newfoundland proper and one in Labrador—as well as a small steel mill, a chemical industry, a flour mill.

BUSINESS ABROAD BRIEFS

Biggest batch of buses ever ordered from Britain's Leyland Motors Ltd. will go to Argentina. Leyland beat out 26 bids—four of them from U. S. firms—for the $11.2-million, 750-bus order.

•

Oil refineries: Sun Oil Co. will build a $10-million refinery at Sarnia, Ontario. March, 1953, is the target completion date; it will handle 10,000 bbl. to 15,000 bbl. daily. . . . Colombia's refinery at Barrancabermeja will get $20-million worth of improvements to boost its capacity to 35,000 bbl. a day. New facilities will include a catalytic cracking unit, an aviation gas unit, a crude pipe still. International Petroleum (Colombia) Ltd., a Standard Oil Co. (N. J.) affiliate, will run the refinery for Colombia and lend the government $10-million to help finance the expansion.

•

North America's newsprint production hit an all-time monthly high in June. Canada's output was 464,332 tons; the

U.S. turned out 94,073 tons. For the first six months of the year, U.S. and Canadian production is 7.2% higher than in 1950 (BW–Jul.7'51,p145).

•

Japan is bogey: Five textile mills in Indonesia are about to close down because of Japanese competition, according to Amsterdam reports. . . . India fears it is losing its position as the world's No. 1 cloth exporter. Japan's 1951 export target is 1,500-million yd., compared with India's 800-million yd. Last year both countries exported 1,100-million yd. . . . Sales of "nearly $1-million" are reported by officials of Seattle's Japanese trade fair (BW–Jul. 7'51,p148). Another fair is slated for 1952.

•

France, Italy, and Switzerland plan to dig an eight-mile tunnel under Mont Blanc. It will provide a direct, all-weather highway between France and Italy, will cost $17-million. A private company yet to be formed will put up 37% of the capital; France, Italy, and the canton of Geneva, the rest.

Troubleshooter

This week there was new hope of a settlement of the Iranian oil problem. One expert who helped in the negotiations is private petroleum consultant Walter J. Levy, W. Averell Harriman's right-hand man on the delicate oil mission. During the war Levy served with the OSS, and until he set up shop on his own he was chief of ECA's petroleum division. Levy knows world oil backwards and forwards, often is found behind the scenes mediating international petroleum squabbles. One of his clients is the Venezuelan government, for whom he has just hammered out a new royalty agreement with the foreign oil companies.

Atomic Furnaces in the Service of Peace

The Bomb still dominates our atomic energy program. The not-so-cold war is proof that's the way things must be. But a new and hopeful phase of this great discovery is coming to life. BUSINESS WEEK's annual survey reports how private industry has begun to move with proposals for atomic powerplants (page 99). In quieter times this exciting news might well have second-placed bomb developments in the report. Even in this day of armament races, it is a major industrial event.

The government monopoly of atomic energy was a natural outgrowth of its wartime origin. By the end of the conflict the Manhattan District Project was already a gigantic operation. Its sole purpose was military. The enormous capital outlay required plus virtually zero profit prospects discouraged private interests. There was also concern about security problems.

All these things pointed to government ownership. The only debate was whether the program should be under civilian or military control. That issue was wisely resolved in favor of civilians.

Since then very little progress has been made in changing all this, in getting industry into the program on its own. Several factors are responsible:

• The law itself imposes severe restrictions on industry participation. It bars access to vital information and to the fissionable materials themselves.

• Industry's interest did not pick up, and for understandable reasons. Investment in structures and equipment required is immense. Security aspects are discouraging both as to policing personnel and protecting fissionable materials. Dangers of radioactive damage to installations and workers are very real and costly to guard against. Trained personnel have been virtually unavailable. Profit possibilities have seemed nonexistent.

The result is that so far industry participation has been limited mainly to contract operation of government installations on a fee basis. Indirectly, of course, other private companies have taken part, such as instrument and equipment makers. Then there is the small business that has developed in radio isotopes.

The Road Ahead

The new phase is much more dramatic and in the tradition of enterprising American business. Four two-company teams are now at work on proposals for private atomic furnaces called reactors. The Atomic Energy Commission has agreed to let these companies send some of their people to the atom laboratories and make proposals to build private atomic powerplants.

The idea is that the teams, Monsanto Chemical-Union Electric of St. Louis, Detroit Edison-Dow Chemical, Bechtel Corp.-Pacific Gas & Electric, Commonwealth Edison-Public Service Co. of Northern Illinois, would build private reactors to produce plutonium for sale to the government for munitions making. The heat by-product they would use to generate electric power. That is what seems possible now. At a later stage it is hoped that a reactor can be developed to use the plutonium produced continuously for power production.

If the work now being initiated proves successful, a big batch of important public questions must be decided (page 108). Here is a sample of what they are like:

How will the price of the power be determined? Will plutonium output be considered to run at about present costs and so make the power byproduct cheap? Or will power be sold at going rates and be made to help carry the cost of plutonium? This sort of question is reminiscent of the TVA debates on allocation of cost among flood control, navigation, and power.

A congressional debate will provide the forum for varying points of view on these questions, since the law requires AEC to get congressional approval before authorizing any private ventures in atomic energy. There no doubt will be arguments from some quarters that Congress should deny private industry access to the atomic energy field on its own. There will likely be a bitter resurgence of the public vs. private power fight.

The whole matter could come before the 83rd Congress in January, 1953, if work now under way moves along well. The Atomic Energy Commission has shown a constructive attitude toward action by private industry in the power field. It remains for the rest of us to see to it that Congress, within the bounds of national security, accords industry every chance to develop peacetime uses for this great new force in the world.

20¢ a Ride

Chicagoans are learning the hard way that there's no magic in government ownership.

Back in 1945 The Illinois General Assembly created the Chicago Transit Authority to own and operate the transportation system in the Cook County metropolitan area. Its proponents promised an end to the harried travelers' woes.

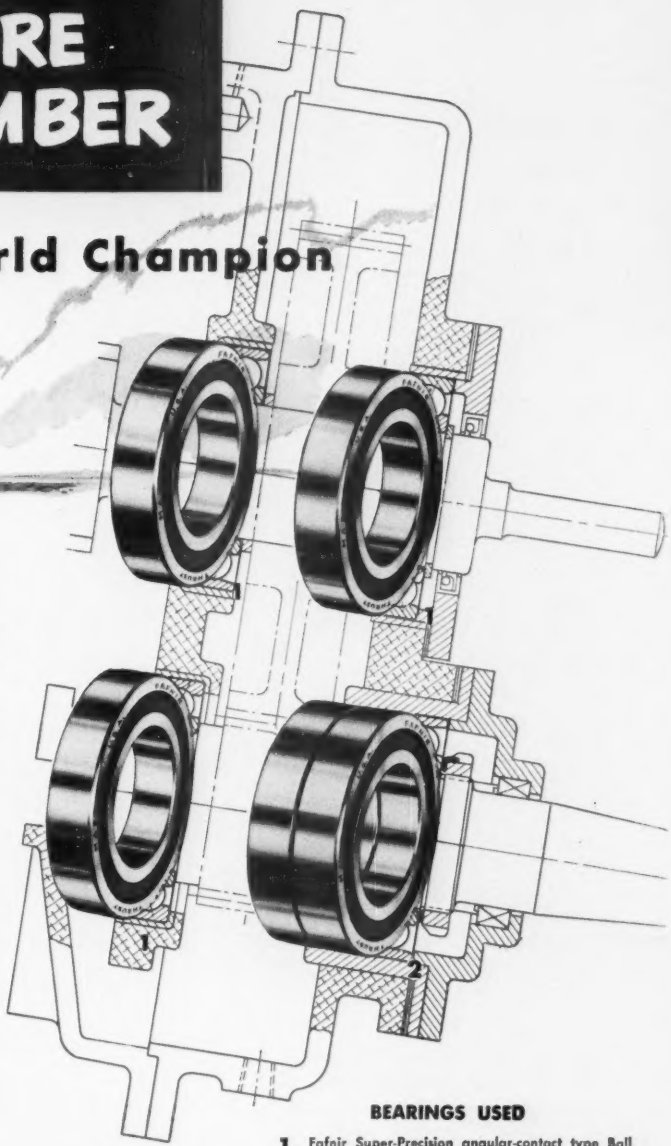
Since CTA took over the system in 1947, passengers have had to absorb a succession of rate increases in order that revenues might cover rising operating costs. Now the press reports that CTA is considering another rate increase. This time all surface and rapid transit fares might be jumped to a record 20¢.

Disillusioned citizens are irate. The promises of 1945 have turned to ashes.

Actually, of course, there is no mystery in this aspect of the postwar inflation. The only mystery is that a good many people still seem to believe that the economic facts of life can be banished by committing them to a government institution.

BEARING TORTURE CHAMBER

of a World Champion



Here's where the boat that traveled 160.3 mph on a straightaway run gets its amazing drive. It's the spur gear box of "SLO-MO-SHUN IV". Only 5 bearings are used in this gear box as against 8 in competing speed boats. The five are Fafnir Super-Precision Ball Bearings.

Conditions under which the bearings operated on the world record run were terrific, although "SLO-MO-SHUN IV" had a damaged drive shaft which made the use of full throttle unwise. Its 3 to 1 step-up ratio turned the output (propeller) shaft at 11,100 rpm and put a thrust load of over 4,600 pounds on the tandem duplex bearing.

Although you may not have such an extraordinary bearing problem to solve, why not take advantage of the Fafnir "extra" that attracts so many bearing users. It's the Fafnir attitude and aptitude . . . a way of looking at bearing problems from your viewpoint . . . an aptitude for coming up with the right answer . . . gained from solving the bearing problems of not just one or two industries, but all industries. The Fafnir Bearing Company, New Britain, Conn.

BEARINGS USED

1. Fafnir Super-Precision angular-contact type Ball Bearings were specified by Western Gear Works of Seattle who designed and built the gear box for "SLO-MO-SHUN IV".

2. Similar to those above except these bearings are duplexed to provide greater axial and radial rigidity.

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